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THE CLEVELAND MUSEUM OF ART

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HANDBOOK OF THE  
SEVERANCE COLLECTION  
OF ARMS AND ARMOR



SECOND EDITION  
THE CLEVELAND MUSEUM OF ART  
CLEVELAND, OHIO  
1948











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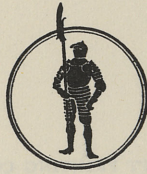
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HANDBOOK  
OF THE  
SEVERANCE COLLECTION  
OF ARMS AND ARMOR



HANDBOOK No. 1

SECOND EDITION  
THE CLEVELAND MUSEUM OF ART  
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Handbook No. 11	1
Handbook No. 12	2
Handbook No. 13	3
Handbook No. 14	4
Handbook No. 15	5
Handbook No. 16	6
Handbook No. 17	7
Handbook No. 18	8
Handbook No. 19	9
Handbook No. 20	10
Handbook No. 21	11
Handbook No. 22	12
Handbook No. 23	13
Handbook No. 24	14
Handbook No. 25	15
Handbook No. 26	16
Handbook No. 27	17
Handbook No. 28	18
Handbook No. 29	19
Handbook No. 30	20
Handbook No. 31	21
Handbook No. 32	22
Handbook No. 33	23
Handbook No. 34	24
Handbook No. 35	25
Handbook No. 36	26
Handbook No. 37	27
Handbook No. 38	28
Handbook No. 39	29
Handbook No. 40	30
Handbook No. 41	31
Handbook No. 42	32
Handbook No. 43	33
Handbook No. 44	34
Handbook No. 45	35
Handbook No. 46	36
Handbook No. 47	37
Handbook No. 48	38
Handbook No. 49	39
Handbook No. 50	40
Handbook No. 51	41
Handbook No. 52	42
Handbook No. 53	43
Handbook No. 54	44
Handbook No. 55	45
Handbook No. 56	46
Handbook No. 57	47
Handbook No. 58	48
Handbook No. 59	49
Handbook No. 60	50
Handbook No. 61	51
Handbook No. 62	52
Handbook No. 63	53
Handbook No. 64	54
Handbook No. 65	55
Handbook No. 66	56
Handbook No. 67	57
Handbook No. 68	58
Handbook No. 69	59
Handbook No. 70	60
Handbook No. 71	61
Handbook No. 72	62
Handbook No. 73	63
Handbook No. 74	64
Handbook No. 75	65
Handbook No. 76	66
Handbook No. 77	67
Handbook No. 78	68
Handbook No. 79	69
Handbook No. 80	70
Handbook No. 81	71
Handbook No. 82	72
Handbook No. 83	73
Handbook No. 84	74
Handbook No. 85	75
Handbook No. 86	76
Handbook No. 87	77
Handbook No. 88	78
Handbook No. 89	79
Handbook No. 90	80
Handbook No. 91	81
Handbook No. 92	82
Handbook No. 93	83
Handbook No. 94	84
Handbook No. 95	85
Handbook No. 96	86
Handbook No. 97	87
Handbook No. 98	88
Handbook No. 99	89
Handbook No. 100	90

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Handbook No. 11	1
Handbook No. 12	2
Handbook No. 13	3
Handbook No. 14	4
Handbook No. 15	5
Handbook No. 16	6
Handbook No. 17	7
Handbook No. 18	8
Handbook No. 19	9
Handbook No. 20	10
Handbook No. 21	11
Handbook No. 22	12
Handbook No. 23	13
Handbook No. 24	14
Handbook No. 25	15
Handbook No. 26	16
Handbook No. 27	17
Handbook No. 28	18
Handbook No. 29	19
Handbook No. 30	20
Handbook No. 31	21
Handbook No. 32	22
Handbook No. 33	23
Handbook No. 34	24
Handbook No. 35	25
Handbook No. 36	26
Handbook No. 37	27
Handbook No. 38	28
Handbook No. 39	29
Handbook No. 40	30
Handbook No. 41	31
Handbook No. 42	32
Handbook No. 43	33
Handbook No. 44	34
Handbook No. 45	35
Handbook No. 46	36
Handbook No. 47	37
Handbook No. 48	38
Handbook No. 49	39
Handbook No. 50	40
Handbook No. 51	41
Handbook No. 52	42
Handbook No. 53	43
Handbook No. 54	44
Handbook No. 55	45
Handbook No. 56	46
Handbook No. 57	47
Handbook No. 58	48
Handbook No. 59	49
Handbook No. 60	50
Handbook No. 61	51
Handbook No. 62	52
Handbook No. 63	53
Handbook No. 64	54
Handbook No. 65	55
Handbook No. 66	56
Handbook No. 67	57
Handbook No. 68	58
Handbook No. 69	59
Handbook No. 70	60
Handbook No. 71	61
Handbook No. 72	62
Handbook No. 73	63
Handbook No. 74	64
Handbook No. 75	65
Handbook No. 76	66
Handbook No. 77	67
Handbook No. 78	68
Handbook No. 79	69
Handbook No. 80	70
Handbook No. 81	71
Handbook No. 82	72
Handbook No. 83	73
Handbook No. 84	74
Handbook No. 85	75
Handbook No. 86	76
Handbook No. 87	77
Handbook No. 88	78
Handbook No. 89	79
Handbook No. 90	80
Handbook No. 91	81
Handbook No. 92	82
Handbook No. 93	83
Handbook No. 94	84
Handbook No. 95	85
Handbook No. 96	86
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THE CLEVELAND MUSEUM OF ART









The Armor Court of The Cleveland Museum of Art  
Showing foremost mounted figure with Armor of Man and Horse, German, about 1535



## PREFACE



ARMOR and armor have assumed once more the important position in the field of art which was theirs for so many centuries. During the three hundred years between 1400 and 1700, the armorer was recognized as an artist, one who wrought into beauty a very difficult material, and whose work had, aside from its aesthetic importance, the very vital function of defending a man against the danger of death. Even after its use had declined, armor continued to be recognized as art of high rank, but with the social upheavals of the late eighteenth century, there came a period when appreciation of fine old suits of steel was at its lowest ebb. Armor had been so definitely a badge of high station that its destruction became a symbol of the leveling of all ranks and was, in such deluges as the French Revolution, the more joyously carried on. And in countries where the third estate came less explosively into power, an even more deadly indifference and neglect had their effect. Armor was like too recently cast-off clothing, out of style without having as yet attained to respect as being ancient. It lacked perspective, a quality which it has only gained within the last fifty years. A few collectors "above the clouds" in art matters kept the beauty of armor clear in their minds and have brought together what destruction and neglect have spared. European museums have preserved as much for its historical significance as for its art value, most of the fine armor which has survived. Armor of significance in great families has been gathered in, and here and there a private collector has searched the field and then disposed of his findings in a group.

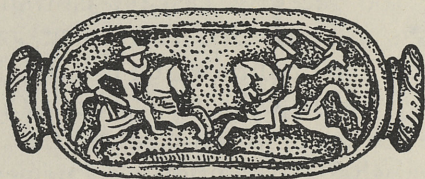
In America there is not a great amount of armor. The Metropolitan Museum has a splendid collection, and there are, in and about New York, several small private collections of splendid quality. The Cleveland Museum has been fortunate in securing, by the gift of Mr. and Mrs. John L. Severance, the armor gathered in Europe by Frank Gair Macomber, a collection which contains some very beautiful pieces. These were added



to by later gifts of Mr. and Mrs. Severance, until the Armor Court of the Museum presents a most attractive display. In all there are five hundred ninety-eight pieces, comprising fifteen suits and partial suits, thirty-nine separate helmets, many valuable pieces of body armor, and excellent examples of riveted chain mail, one hundred twenty-one swords of splendid quality, guns and gun parts, crossbows and their winders, maces, daggers, and eighty-nine pole arms.

These are arranged in order of period, beginning at the southwest corner of the court with the earlier weapons, and the fifteenth century body armor, and continuing along the south wall and so around, the pieces latest in period occurring on the north side of the court.

HELEN IVES GILCHRIST.





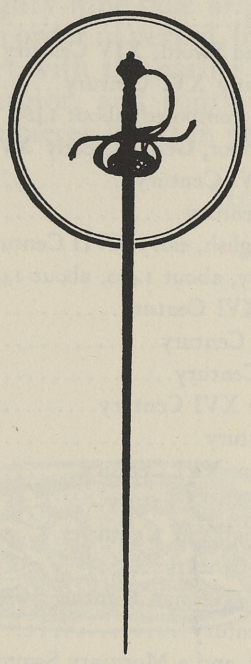
# CONTENTS AND ILLUSTRATIONS

	Page
History of Armor.....HELEN IVES GILCHRIST	9
Glossary of Terms.....	53
Armors' Marks.....	58
Illustrations.....	19
Frontispiece, The Armor Court of The Cleveland Museum of Art showing foremost mounted figure with Armor for Man and Horse, German, about 1535.....	
1 Bascinet, Hauberk, and Sword, XIV Century.....	21
2 Brigandine, Italian, early XVI Century.....	22
3 Suit of Gothic Armor, composed, about 1480.....	23
4 Suit of Maximilian Armor, German, early XVI Century.....	24
5 Ecrivisse Suit, late XVI Century.....	25
6 Suit, Spanish, XVI Century.....	26
7 Pikeman's Armor, English, early XVII Century.....	27
8 Helmets, XIV Century, about 1450, about 1480.....	28
9 Maximilian Armets, XVI Century.....	29
10 Closed Helmets, XVI Century.....	30
11 Open Helmets, XVI Century.....	31
12 Cabasset, Italian, late XVI Century.....	32
13 Breastplates, XV Century.....	33
14 Espalier Plates, Italian, XVI Century.....	34
15 Colletin, French, late XVI Century.....	35
16 Early Swords, XIII and XIV Centuries.....	36
17 Swords, Italian, XVI Century.....	37
18 Two Italian Falchions, German Hunting Sword, XVI Century....	38
19 Six Rapiers, XVII Century.....	39
20 Basket Hilted Swords, and a Mortuary Sword, XVII Century.....	40
21 Pistols, XVI, XVII and XVIII Centuries.....	41
22 Rifles and Gun Rest, XVII Century.....	42
23 Crossbows and Winders, XVI and XVII Centuries.....	43
24 Pole Arms, XV Century.....	44
25 Pole Arms, XVI and XVII Centuries.....	45
26 Axes and War Hammers, XV, XVI and XVII Centuries.....	46
27 Daggers, XV and early XVI Centuries.....	47
28 Daggers, XV, XVI and XVII Centuries.....	48
29 Horse Armor and Bits, XVI Century.....	49
30 Maces, XV and XVI Centuries.....	50
31 Rondaches, Spanish and German, XVI Century.....	51
32 Rondache, Italian, late XVI Century.....	52



CONTENTS AND ILLUSTRATIONS

1	Introduction
2	Part I. The Early Period
3	1. The Early Period
4	2. The Early Period
5	3. The Early Period
6	4. The Early Period
7	5. The Early Period
8	6. The Early Period
9	7. The Early Period
10	8. The Early Period
11	9. The Early Period
12	10. The Early Period
13	11. The Early Period
14	12. The Early Period
15	13. The Early Period
16	14. The Early Period
17	15. The Early Period
18	16. The Early Period
19	17. The Early Period
20	18. The Early Period
21	19. The Early Period
22	20. The Early Period
23	21. The Early Period
24	22. The Early Period
25	23. The Early Period
26	24. The Early Period
27	25. The Early Period
28	26. The Early Period
29	27. The Early Period
30	28. The Early Period
31	29. The Early Period
32	30. The Early Period
33	31. The Early Period
34	32. The Early Period
35	33. The Early Period
36	34. The Early Period
37	35. The Early Period
38	36. The Early Period
39	37. The Early Period
40	38. The Early Period
41	39. The Early Period
42	40. The Early Period
43	41. The Early Period
44	42. The Early Period
45	43. The Early Period
46	44. The Early Period
47	45. The Early Period
48	46. The Early Period
49	47. The Early Period
50	48. The Early Period
51	49. The Early Period
52	50. The Early Period
53	51. The Early Period
54	52. The Early Period
55	53. The Early Period
56	54. The Early Period
57	55. The Early Period
58	56. The Early Period
59	57. The Early Period
60	58. The Early Period
61	59. The Early Period
62	60. The Early Period
63	61. The Early Period
64	62. The Early Period
65	63. The Early Period
66	64. The Early Period
67	65. The Early Period
68	66. The Early Period
69	67. The Early Period
70	68. The Early Period
71	69. The Early Period
72	70. The Early Period
73	71. The Early Period
74	72. The Early Period
75	73. The Early Period
76	74. The Early Period
77	75. The Early Period
78	76. The Early Period
79	77. The Early Period
80	78. The Early Period
81	79. The Early Period
82	80. The Early Period
83	81. The Early Period
84	82. The Early Period
85	83. The Early Period
86	84. The Early Period
87	85. The Early Period
88	86. The Early Period
89	87. The Early Period
90	88. The Early Period
91	89. The Early Period
92	90. The Early Period
93	91. The Early Period
94	92. The Early Period
95	93. The Early Period
96	94. The Early Period
97	95. The Early Period
98	96. The Early Period
99	97. The Early Period
100	98. The Early Period





## HISTORY OF ARMOR



ARMOR has been a part of life for so many years that its beginnings, like man's own are lost. Primitive at first, then taking on splendor with the growth of art and with the hero worship accorded great leaders like Achilles, whose armor the gods made, it has come down to us with a double glamour. It is history and it is art, the form of art most closely allied with humanity and its will to live, a part of the very struggle for existence in the great fighting centuries.

Armor, as we know it from its surviving forms, is an incomplete record, one that must be pieced out by consulting old effigies on the tombs of knights, early illuminations, seals, and references in the literature of many centuries. All this lack of actual armor only adds to the value of what is left, as the sibyl's books, reduced from nine to three, became triply precious.

The armor of classic antiquity was bronze, a material still in use for war harness in the second century B. C., though the Gallic soldier of that time wore less of it than the earlier Greek had used. The Gaul completed his defence by adding a leather shirt, and his shield was of wood, leather-covered, with a border and other strengthening parts of iron. By the end of that century, iron had superseded bronze altogether and the Roman, the greatest soldier of his age, wore a headpiece, breastplate, and backplate of iron, and carried an iron dagger (bronze-hilted), sword, and lance. Then, in varying forms, the use of iron and leather continued for many centuries. The early armorer learned to harden leather into cuir bouilli by steeping it in wax in which certain essences had been dissolved. He formed his hardened leather into breastplates of overlapping scales, into shields, greaves, and other defences. The scale armor, however, was not always of cuir bouilli. In the tenth century, we find instances of iron scales and of horn, with a gilded or painted surface.



Up to the middle of the thirteenth century, European armor could be grouped roughly as being of cloth, leather, combinations of cloth with metal or leather, and of chain mail. The best known cloth armor was the jack, a garment in jacket form made of two layers and stuffed with a medley of things such as cloth folded many times, bits of metal, leather, anything in fact which could serve as a buffer between one man's weapon and another man's skin. The jack has seemed at times a poor man's defence, but in its richer forms it clad nobility as well. On the fateful ride when insanity first overtook him, Charles V of France was wearing "a jacked covered with black velvet which sore chafed him."

Then there was the gambeson, a quilted or gamboised garment worn under other armor, especially under chain mail. The surcoat, as its name implies, was intended to be worn over body armor. It is not to be confused with the civil garment of the same name. The military surcoat first appeared in the twelfth century. The pourpoint differed from it in being, probably, heavier and more of a defence, though it, too, was worn over chain mail.

The famous Bayeux embroidery of the eleventh century and certain illuminations of the twelfth and thirteenth centuries furnish grounds for believing that there were at least eight varieties of body armor during the three centuries, all popularly known as "coats of mail." These were classed and described by the first great writer on armor, Sir Samuel Meyrick, as ringed, mascléd, trellised, rustred, scaled, tegulated, banded, and chain. All of these, except the last, were made by superimposing metal in small pieces upon a backing of cloth or leather, the differences being in the details of the construction and the forms of the metal pieces. The jazerant and the brigandine are the cloth and metal forms most frequently to be met with in literature. These were corselets of steel plates riveted together. The difference between them, according to the opinion of the majority, was that in the brigandine the metal plates were attached to a surface of velvet or other stuff, while in the jazerant, the metal was outside and the inner surface was of cloth. The valuable brigandine front<sup>1</sup> in the

<sup>1</sup> Illustration 2.



Severance armor collection dates from the early sixteenth century, but its construction is the same as that of three centuries earlier. With the chain mail hauberks, it forms a close link between early and late armor forms.

Chain mail is the type of armor most persistent through the centuries. It has played a prominent part in many wars. Worn over a gambeson, it afforded good protection from the average body blow, though a serrated mace could tear it, and there are instances on record of its being pierced by a heavily thrown spear, or by a sword thrust. Its origin was probably oriental, but the use of it even among the people of northern Europe is early. The Anglo Saxon chieftains wore "war nets woven by the smith;" the Crusaders crossed Europe in it; and its use lasted long after the introduction of plate. Its construction was always laborious, and especially so before wire drawing was discovered, an innovation assigned to the early years of the fourteenth century. Before that discovery, thin sheets of metal were cut into strips to provide the rings. These strips, and later the wire, were twisted around a cylindrical bar and cut off. Then the ends of each open circlet were flattened and bored. Each ring was linked with four others, and then the flattened ends were riveted together and burred shut. After the reign of Edward I, double chain mail came in, having each link formed of six rings instead of four. These rings were of various sizes. One hauberk<sup>1</sup> in the Severance collection is composed of rings ranging from one-eighth to one-sixteenth of an inch in diameter. Across the chest this hauberk is double-linked, and the border at the lower edge is made of latten rings. Another hauberk in the collection is formed of rings seven-sixteenths of an inch across.

The chain mail hauberks of the eleventh century covered the head, leaving only a face opening, and they extended below the knees. In the twelfth century, we find chain mail suits complete from head to foot, although of course chain mail alone, or even worn over a coif or padded cap, was not sufficient protection for the head. A helmet of plate was always worn in battle. In the early thirteenth century, there are effigies of knights in complete armor of chain mail, some of them with metal caps

<sup>1</sup>Illustration 1.



beneath the chain hoods. Sometimes the plate helmet was worn over the chain mail, and the bascinet headpieces of the period are pierced at the edge for the attachment of a chain cape known as the camail, which protected the lower half of the head and the neck and shoulders.

Up to the middle of the thirteenth century, the shield answered duty as plate body covering, being shifted to cover any part in need of protection. Then plates of iron, copper, or cuir bouilli began to be added over the knee joints, next over the elbows, and gradually, in the course of the next century and a half, the suit of plate armor was evolved.

Headpieces changed many times in the history of armor. The classic type with its high, backward sweeping crest gave way to forms more befitting the changing demands of warfare. The crest was, for a time, lost sight of, and then, in Anglo-Saxon days, we find helms surmounted by an animal or other device of the knight's family, a custom which lasted late. The jousting helm of the great kingmaker, Richard Beauchamp, Earl of Warwick, was topped by a bear erect and clinging to a ragged staff. There were several styles of headpiece common to the thirteenth century. In a single manuscript of that time we find the mail head covering, the low, conical helmet with nasal guard, the almost cylindrical helmet with very wide nasal guard, and the basin-like headpiece with a deep, enriched border.

The seal of Richard Coeur du Lion depicts the monarch in a high, conical helm which comes well down over his head hiding his face. He looks out through an ocularium or eyeslit. The type of helmet which survived most lustily in the thirteenth century was the cylindrical helm, which gradually became lower until it had shrunk to a steel cap. Occasionally in the thirteenth century, we find a rim of plate outlining the face and attached, at either side, to the mail cap.

The bascinet is the helmet<sup>1</sup> which carries on the sequence into the fourteenth century. It was at first a low cap bluntly pointed, but its height had increased by the first of the fourteenth century. Until then it was, more often than not, visorless, but many of the fourteenth century bascinets were equip-

<sup>1</sup> Illustrations 1, 8.



ped with long, pointed visors, pig-faced, dog-faced, or with a tortured resemblance to a human countenance. Over the bascinet, the warrior often set a high helm—or presently wished that he had. In 1340, Froissart says of the Earl of Hainault and his uncle, “and eche of them had such a stroke on the heed with stones that their bassenettes ware cloven and their heedes sore astonyed.”

It is in Froissart during the middle years of the fourteenth century that we find the earliest references to the *salade*, the headpiece which was the most favored type through the century following. It is a beautiful form of helmet, distinguished by its length from front to back and its long and sometimes pointed sloping protection down over the back of the neck. Some *salades* are in one piece, others have a movable visor. The *salade*<sup>1</sup> in the Severance collection, worn with suit 16.1613, is of the German, one-piece type.

Once the fifteenth century is reached, we find complete armor of plate in use. Suits of the first half of the century are extremely rare, and again the evidence of contemporary documents is sought. The knightly effigies of this period are most interesting. They show the gradual development towards that flower of all armor, the Gothic suit of the late fifteenth century.

In the earliest of these fifteenth century suits, the sleeping knight wears a bascinet with camail attached, and his heaume or high helm is close at hand. A hauberk of chain mail shows below the edge of his narrow cuirass which is in turn covered by a tightly fitting surcoat. His shoulders are protected by pauldrons of several plates, and his arms are entirely clad in plate; his elbow cops are well jointed. His gauntlets are apparently of cuir bouilli reinforced by small metal plates. His leg armor is complete, the knee cops small, and his sollerets are much the same long, slender, pointed foot coverings that we see on the suits of eighty years later.

With the advance of the century, the suits grow in grace. Less and less is cuir bouilli used. The headpiece changes so that the high helm is no longer needed, except for the joust. Some forms of the bascinet continue in use, but the *salade* is

<sup>1</sup> Illustration 3.



developing, and a hat-shaped helmet, the chapel de fer,<sup>1</sup> comes into favor. On the body armor, tuilles appear attached to the lengthening taces. The form of the shoulder guard varies. No exact date can be set down for any of the innovations. Armor developed at varying rates in its several parts and in different countries. Indeed, the knight, as Laking laments, "without any thought or feeling for the student of armor in the future centuries proceeded in his arbitrary way, to alter the fashion of his head protection in one period, of his body armor in another, and of his leg defences and his defensive weapons in even a third and fourth, allowing the fashion in the case of every piece of armament to overlap in a most perplexing manner."

However, the overlappings can be kept track of by the student with a fair amount of accuracy after the fifteenth century has been reached, when actual armor can be studied. That fact and the beauty of the late fifteenth century suits instil a zest into the study which mere records cannot produce. At its best the Gothic armor of the last quarter of the fifteenth century is unrivaled. Its steel has a temper never since bettered, while ornamentation, though carried to a high degree of excellence, still keeps its place as secondary to protection. In beauty of line, in delicately traced, single ridging, and in the slender pointing of its parts, a late fifteenth century suit is a satisfying work of art.

The Severance collection possesses one Gothic suit,<sup>2</sup> partly modern, four fine Gothic breastplates,<sup>3</sup> and three helmets of different types dating between 1450 and 1480.<sup>4</sup> The rarest of the helmets is an armet à rondelle. The armet, appearing first about the middle of the fifteenth century, succeeded the salade in popular favor at the end of the century, and is the form most often to be met with in the first half of the sixteenth. Its use continued after that, but an increasing number of open helmets had sprung into being then and were much in demand.

The armet<sup>5</sup> is a closed (or close) helmet, its face defences consisting of visor, ventail and bevor. The first two are some times

<sup>1</sup> Illustration 8.

<sup>2</sup> Illustration 3.

<sup>3</sup> Illustration 13.

<sup>4</sup> Illustration 8.

<sup>5</sup> Illustrations 8-10.



formed in one piece pierced above with an eyeslit or ocularium and below with breathing apertures. The bevor and the back of the skull are shaped in closely about the neck, and usually two or more rounded, laminated plates defend the back of the neck and, at the front, extend a little distance down over the gorget.

Sixteenth century armor begins with the Maximilian type whose origin is popularly ascribed to Germany. It is well represented in the Severance collection by two complete suits (16.1714 and 16.1898),<sup>1</sup> and by a number of separate helmets. A Maximilian suit is unmistakable. Its surfaces are rounded or globose, its waistline is higher than that of the Gothic suit, its tassets splayed wide, its sollerets are exaggeratedly square-toed, its terminals blunted, and its ornamentation consists of series of nearly parallel grooves between outlined, rounded ridges. The German Maximilian suits are distinctly grooved; in the Italian forms, the fluting is formed as ridges upon a rather flat background. Towards the end of the Maximilian period, the grooving is less used, but the form remains unchanged.

Horse armor was complete during this period, less for war usage than for the fashion of warlike games. The joust and the tournament, so entertainingly described by Froissart, had changed mightily since his day. The rules were complex, as rules must be to fit so many forms of combat with dangerous weapons, which still must not bring about deadly results. There were many varieties of joust in fashion in the early sixteenth century, and the reinforcing guards or "pieces of change" were numerous. A suit was no more complete without its many pieces of change (sometimes as many as one hundred) than a golfer's equipment would be with one club and a ball. A heavy German suit showing some of the reinforcing guards is mounted in the center of the armor court. In period it is a little later than the Maximilian, whose flutings and squared outlines lasted only about thirty years.

Complete suits of plate continued to be made for fifty years more, but in ever decreasing numbers. As a war costume, they were becoming impractical, for weapons were outstripping their defensive qualities. After the Maximilian period, poor

<sup>1</sup> Illustrations 4, 9.



material, weaker construction, and greater weight of the several parts characterized armor. Ornamentation increased in richness and variety, but efficiency lagged behind. It came to pass presently, that the more cumbrous pieces were left off, and greater attention was given to the jointing of other parts. Three-quarter suits, then half-suits, high-waisted and with long, many-jointed tassets, finish the century's toll, and run, in ever decreasing numbers, through another decadent century before armor becomes negligible in war and in art.

There is very little seventeenth century armor in the Severance collection. Two guard suits of black and white, the helmet, breastplate and tassets of a suit of pikeman's armor,<sup>1</sup> and a few helmets comprise the entire amount. Neither is there a great variety of horse armor. One composite sixteenth century horse-barding<sup>2</sup> is shown on the foremost mounted figure (23.1067) in the armor court. The crupper with its trefoil pendants is especially interesting.

The sixteenth century helmets<sup>3</sup> are among the most interesting objects in the collection. Besides the armet, there are many fine specimens of the open forms of headpiece, the high-crested, swooping brimmed morions, and the pear-shaped cabassets, narrow of brim and having a small stem at the apex of the skull, the burganets of bonnet form, crested, and having, usually, hinged ear-pieces and an umbril. An outstanding helmet of the Severance collection is the Italian cabasset<sup>4</sup> with its finely traced bands of ornamentation on which evidence of the old gilding can still be seen.

The weapons of the centuries speak for themselves more clearly than does the armor. From the dawn of history there have been swords, simple in form at first, and indeed varying little from that simplicity of wheel or Brazil nut pommel and straight crossguard below a wide blade, until the late fifteenth century was reached.<sup>5</sup> After that, as swordplay developed, the many sword guards appeared which finally attained a graceful

<sup>1</sup> Illustration 7.

<sup>2</sup> Frontispiece.

<sup>3</sup> Illustrations 10-12.

<sup>4</sup> Illustration 12.

<sup>5</sup> Illustration 16.



and satisfying climax at the end of the sixteenth century.<sup>1</sup>

Pole arms<sup>2</sup> too, remaining simple, business-like and deadly weapons of war through the first quarter of the sixteenth century, began then to add ornamentation and to decline gradually to parade usage. Richly engraved with the arms of noble families, the halberds of the late sixteenth century<sup>3</sup> must have added vastly to the magnificence of the household of many a Capulet and Montague.

Among the smaller weapons, daggers show an interesting development. The early forms, the kidney-lobed hilts, and the *dague à rouelle* are each represented by one specimen in the Severance collection.<sup>4</sup>

The later forms of the sixteenth, seventeenth, and eighteenth centuries show a greater variety of ornamentation, exquisite carvings in full relief of men and animals, damascening in gold and silver, and fine piercing of bright steel in Renaissance designs. The blades, too, of these later daggers show a great variety of forms in little—serrated, perforated, panelled, rounded, and arrow-pointed.<sup>5</sup>

The mace ran a course of many centuries, without great change of form.<sup>6</sup> Crossbowmen and knightly leaders, as well, carried and made heavy use of the mace in the fourteenth century. In the sixteenth century forms, one finds a variety chiefly in the shape of the flanges composing the head and in the increase of ornamentation over that used on the earlier forms. The later heads are usually larger, and the handles are less sharply differentiated from the hafts. The mace, after its period of war usage, became a symbol of authority, and was finally succeeded in that office by the baton.

The bow has an interest all its own, connected as it is with old tales of forestry and with the earliest conflicts before wars began. It was a perishable thing, and once its day was past, not even the repeated edicts of kings could revive it. The long bow had its greatest popularity among the English in the

<sup>1</sup> Illustration 17.

<sup>2</sup> Illustration 18.

<sup>3</sup> Illustration 24.

<sup>4</sup> Illustration 25.

<sup>5</sup> Illustration 27.

<sup>6</sup> Illustration 28.

<sup>7</sup> Illustration 30.



latter half of the fourteenth century and throughout the fifteenth. The crossbow was more in favor among European nations during the same period and for another hundred years after the longbow had passed out of existence. Several excellent crossbows<sup>1</sup> are to be found in the Severance collection. Their polished chestnut stocks are overlaid with carved ivory. The cog and ratchet winders of a few of them are also displayed. Their bolts, winged with wood or leather, have likewise survived in fairly large numbers. On some of these bolts the wings are spirally set to produce a spinning motion in the arrow in flight.

The fire arms of the Severance collection are chiefly of the late sixteenth and of the seventeenth century, prominent among them being a rare Sardinian wheel-lock rifle,<sup>2</sup> a pair of gold-mounted duelling pistols signed by Massin, and a ball-butted Ripoll pistol of the eighteenth century.<sup>3</sup> With these are displayed powder flasks and primers of wood, bone, metal, and leather, some of them decorated with fine carving in relief.

There is but one variety of shield in the armor court, the rondache, a parade form of the sixteenth and seventeenth centuries. Three of these are noteworthy, one a Spanish shield of bright steel having a wreath and crucifix in full relief about the center.<sup>4</sup> The second is a German shield decorated by Peter von Speier<sup>4</sup> with mer-centaurs in combat, while the third is a beautifully damascened, russet shield, the work of Hieronymo Spacini of Milan.<sup>5</sup>

HELEN IVES GILCHRIST.

<sup>1</sup> Illustration 23.

<sup>2</sup> Illustration 22.

<sup>3</sup> Illustration 21.

<sup>4</sup> Illustration 31.

<sup>5</sup> Illustration 32.



## ILLUSTRATIONS

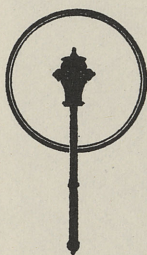


ILLUSTRATION I  
Aerial Photograph of the City and Harbor of New York  
as taken from the air, August 1, 1907









ILLUSTRATION 1  
Bascinet, Hauberk of Chain Mail, and Sword, XIV Century  
See History of Armor, pages 11-13



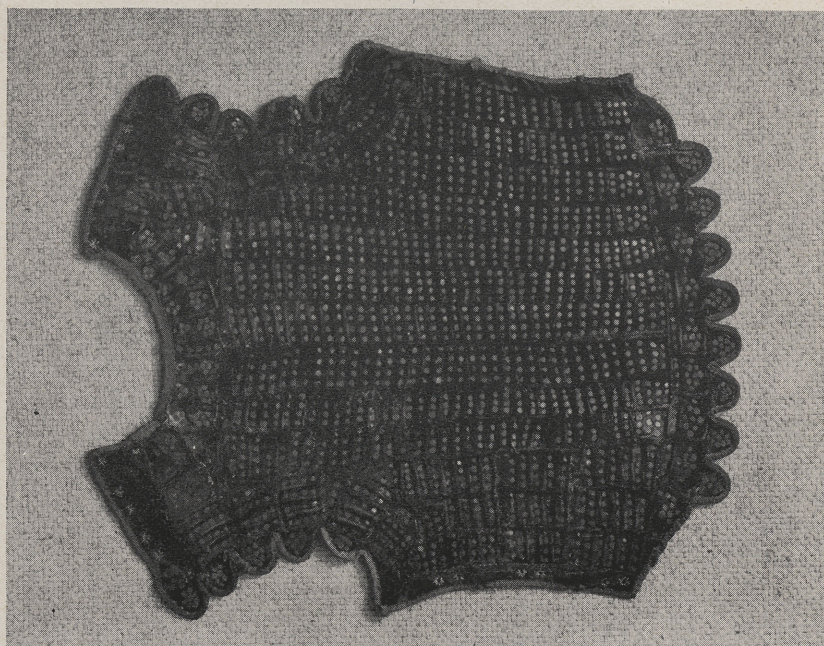
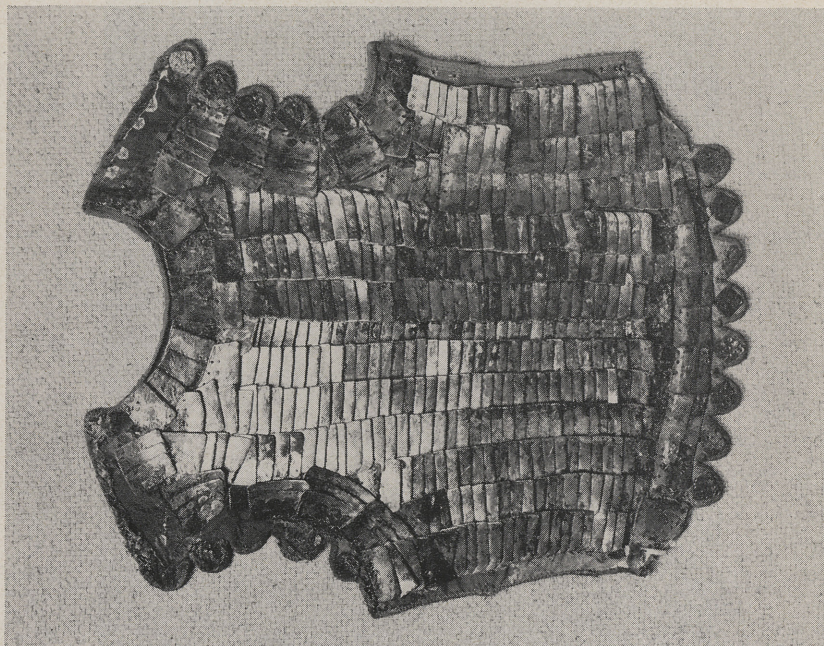


ILLUSTRATION 2  
Inner and outer surface of a Brigandine,  
Italian, Early XVI Century. See History of Armor, page 10



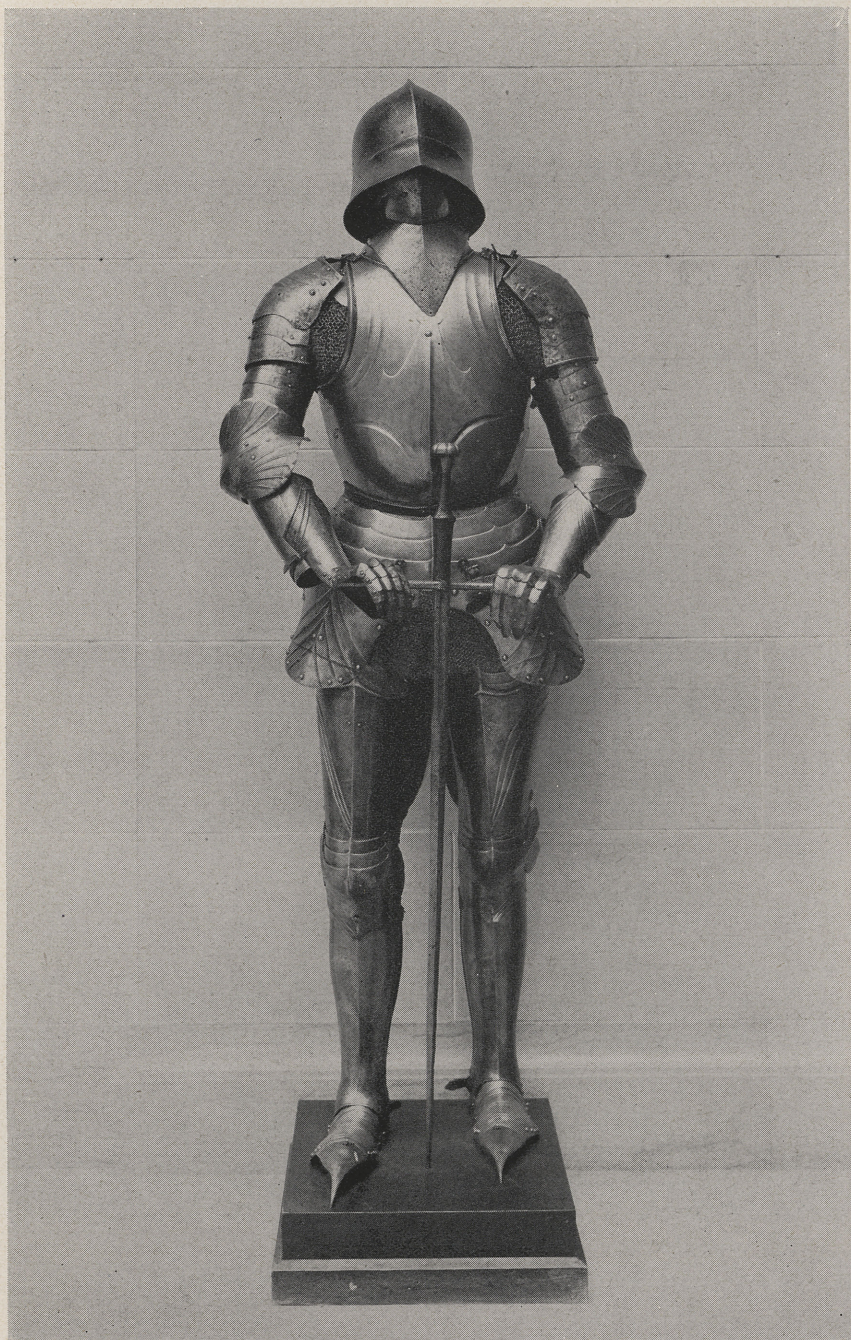


ILLUSTRATION 3  
Suit of Gothic Armor, composed, about 1480  
See History of Armor, pages 13-14



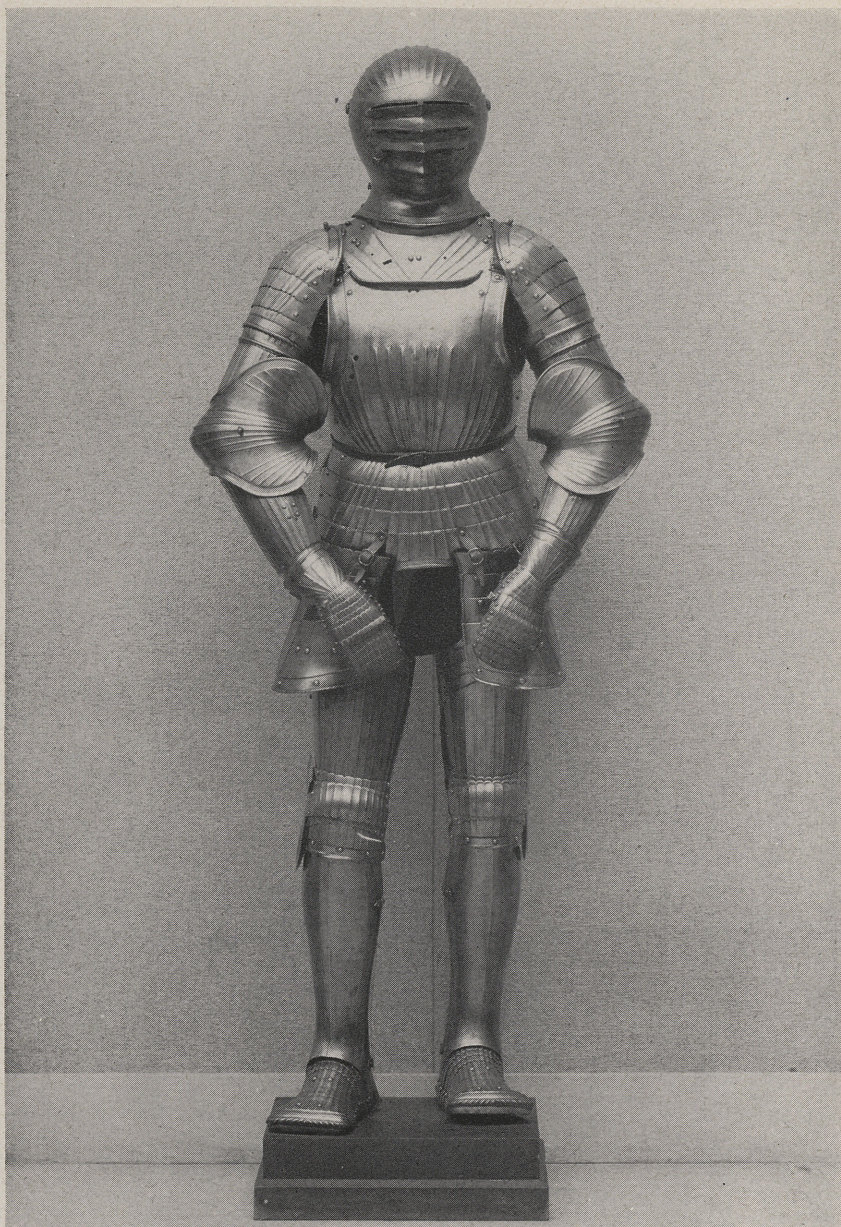


ILLUSTRATION 4  
Suit of Maximilian Armor, German, about 1520  
See History of Armor, page 15



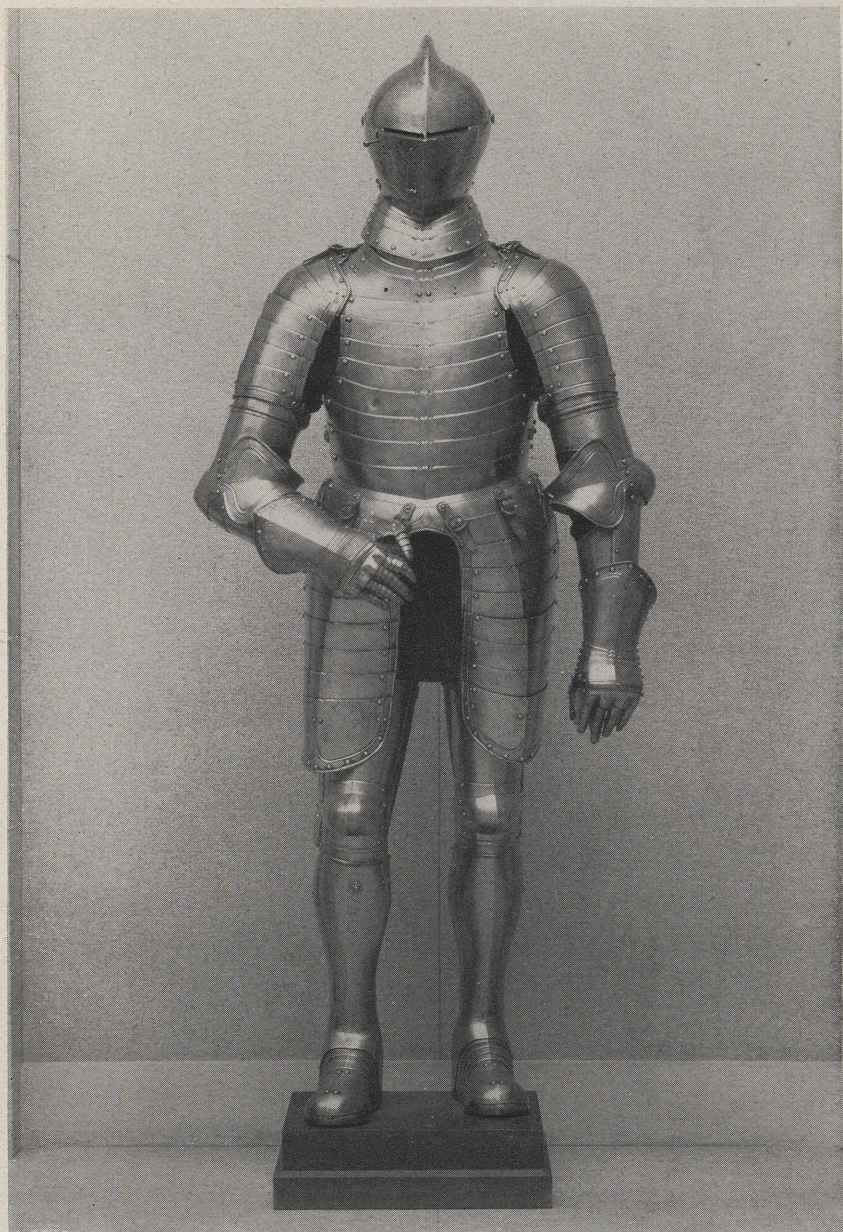


ILLUSTRATION 5  
Suit of Ecrivisse Splint Armor, Latter half of XVI Century



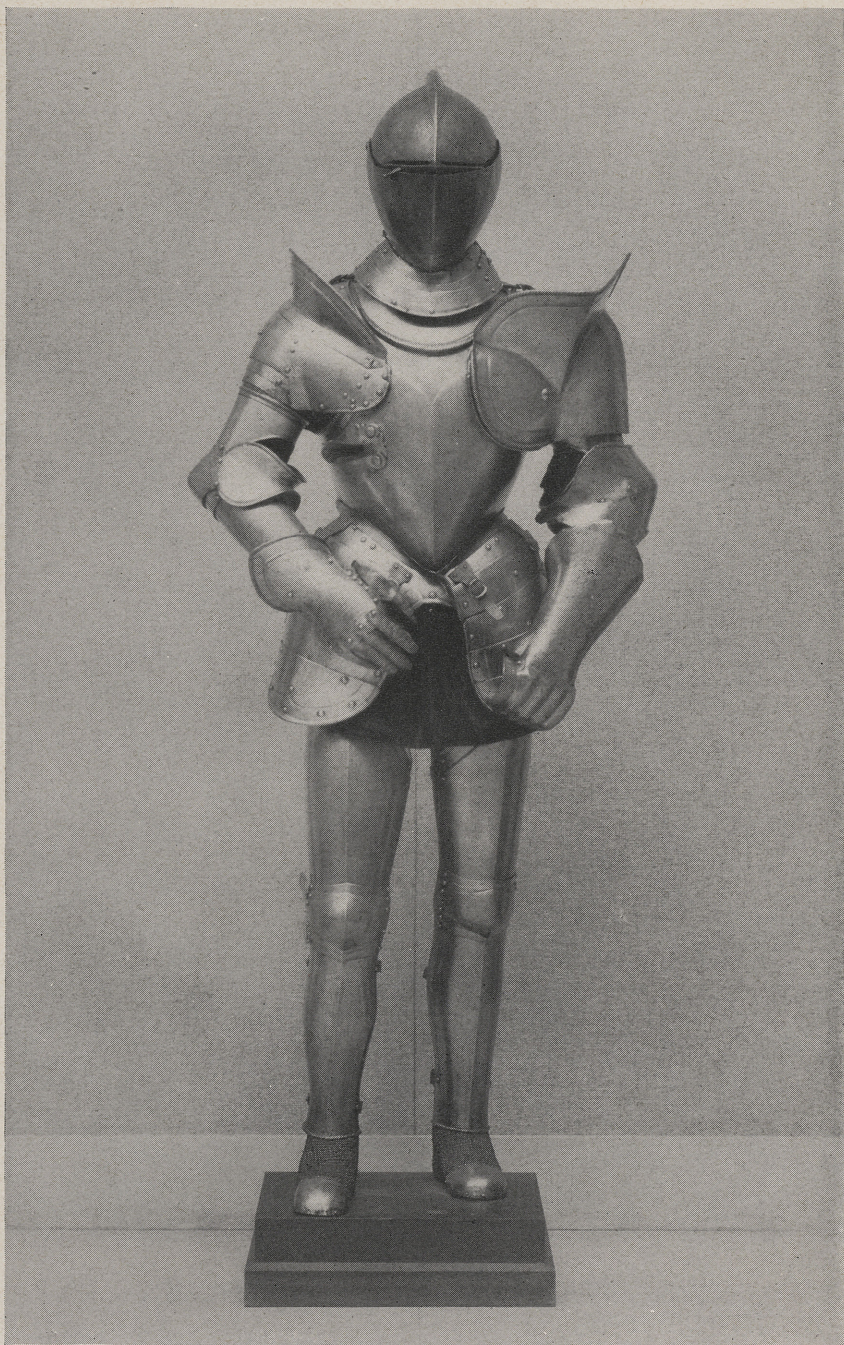


ILLUSTRATION 6  
Suit of Armor with reinforcing pieces for Tournament Fighting  
Spanish, XVI Century



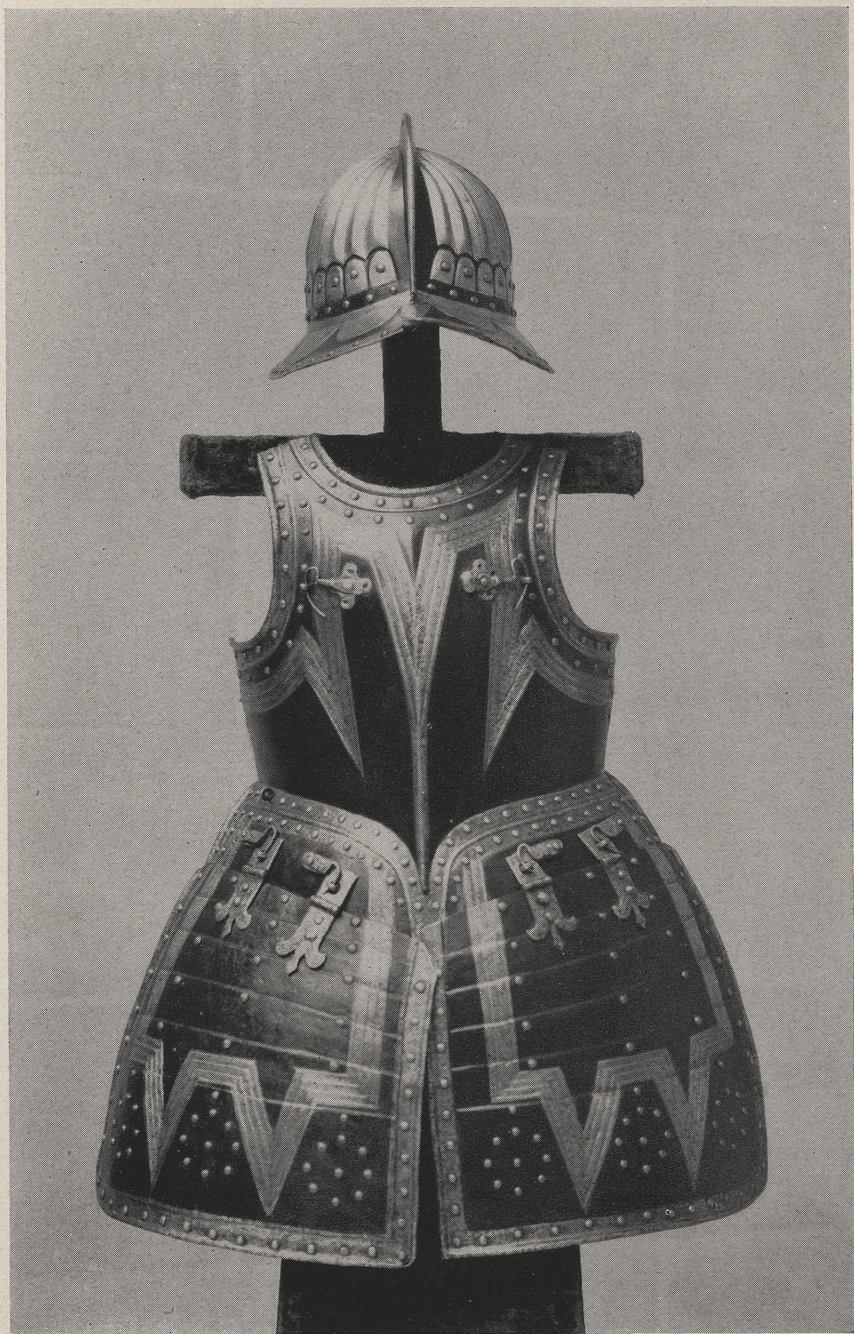


ILLUSTRATION 7  
Pikeman's Armor, English, Early XVII Century  
See History of Armor, page 16



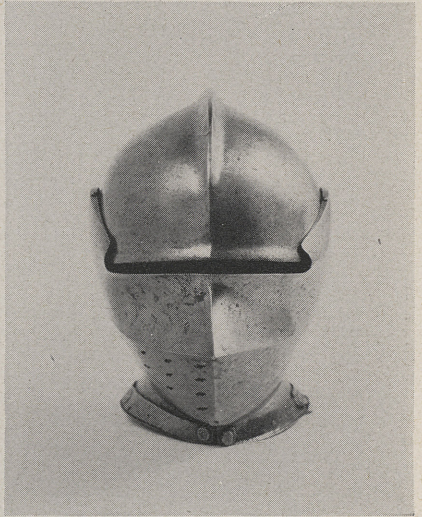
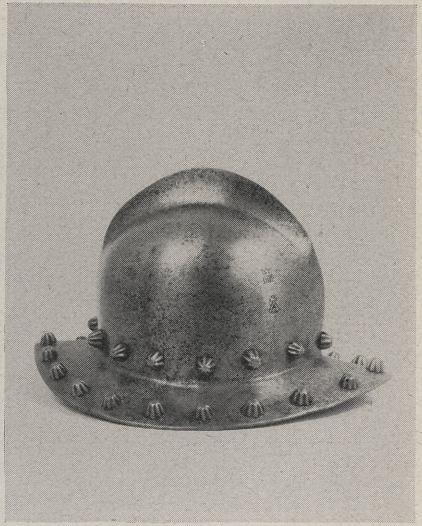
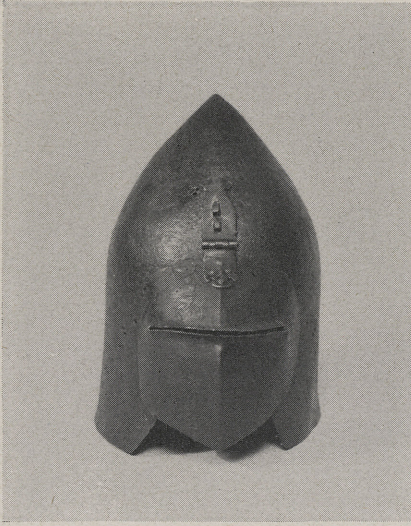


ILLUSTRATION 8

Bascinet  
Italian, XIV Century

Chapel de Fer  
Italian, about 1450

Two views of Armet à Rondelle  
North Italian, about 1480  
See History or Armor, pages 12-14



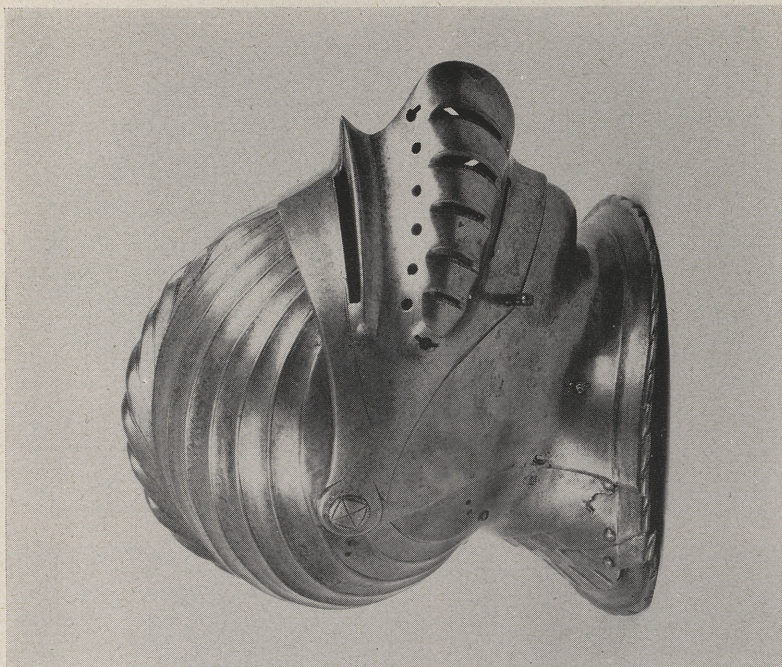
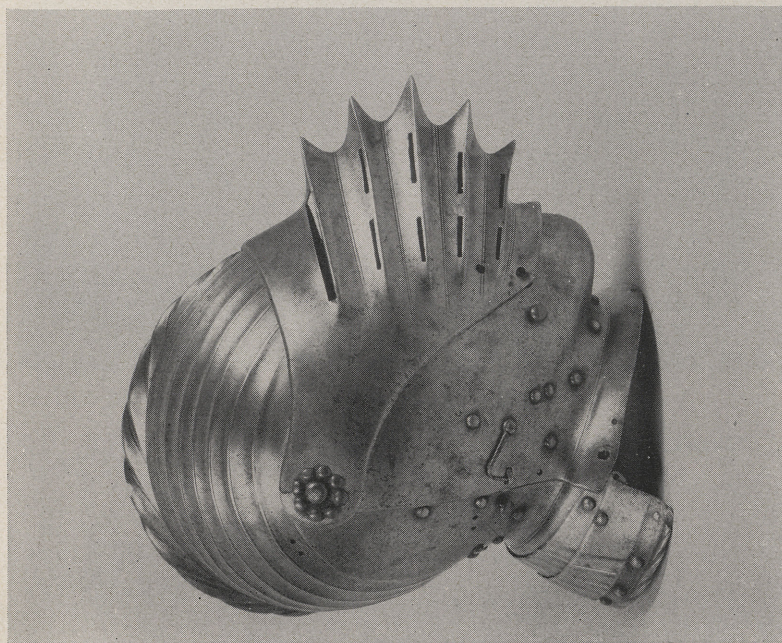
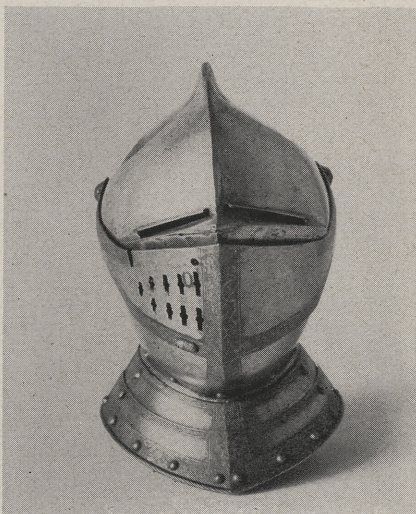
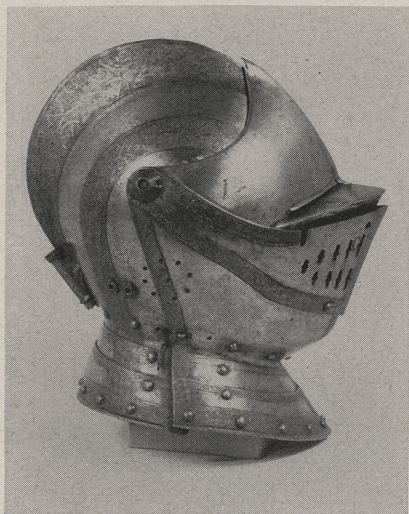
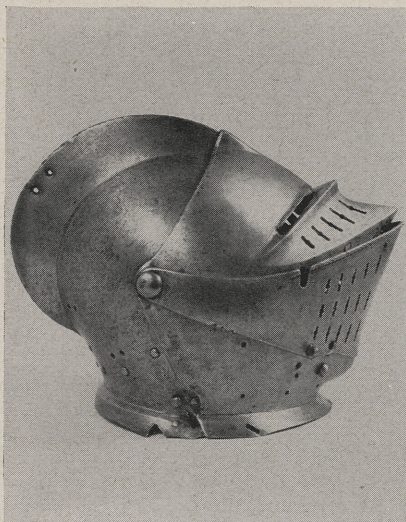


ILLUSTRATION 9  
Two Maximilian Armets, XVI Century  
See History of Armor, pages 14-15





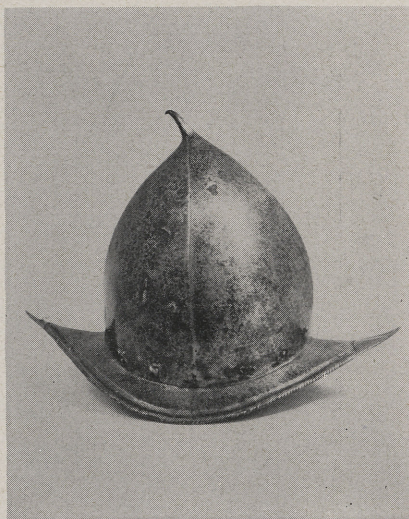
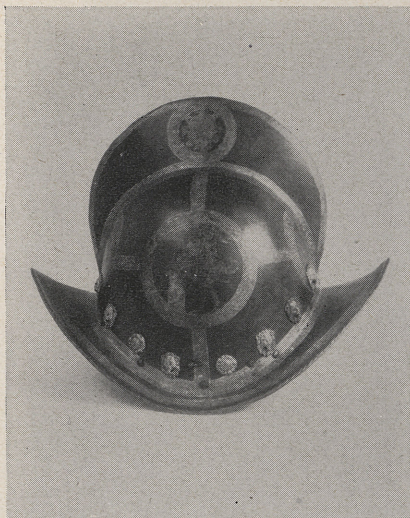
# ILLUSTRATION 10

Armet  
German, XVI Century

Armet  
English, Early XVI Century

Two views of Armet  
German, about 1545  
See History of Armor, pages 14-15





# ILLUSTRATION 11

Two Morions

German, about 1585

Spanish, about 1580

French, about 1550

Two Morion—Cabassets

Italian, XVI Century

See History of Armor, page 16





ILLUSTRATION 12  
Cabasset, Italian, Late XVI Century  
See History of Armor, page 16



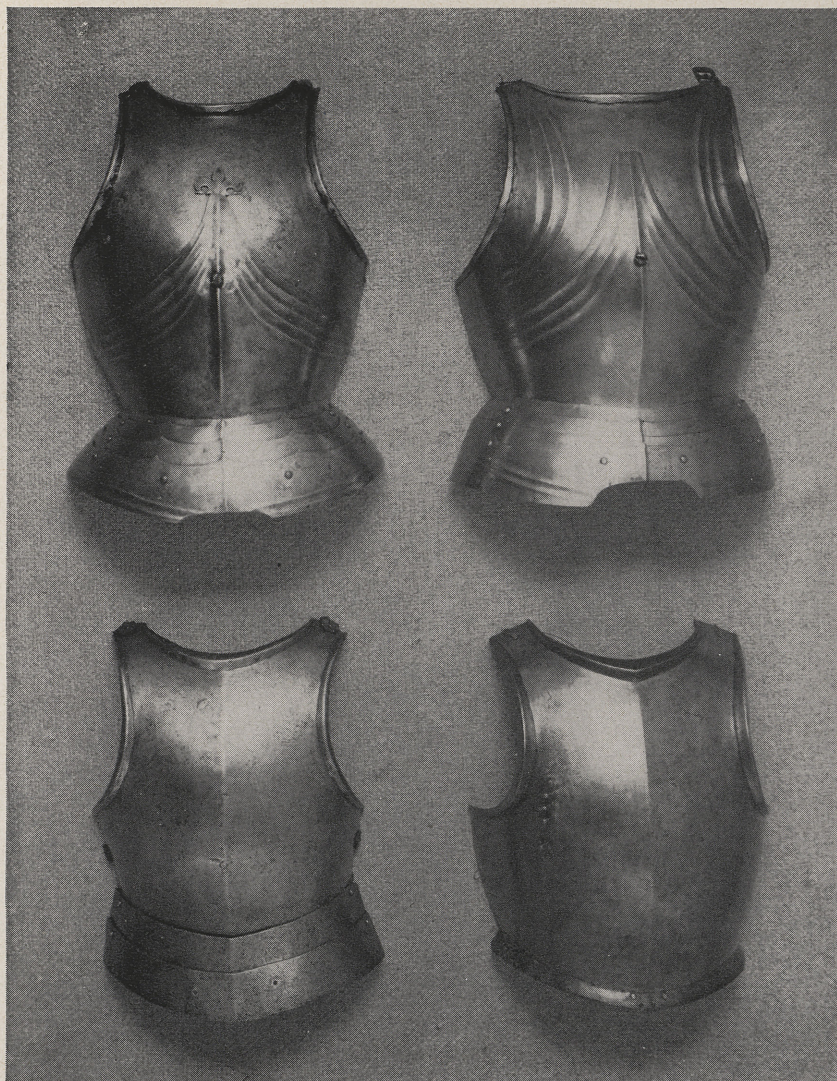


ILLUSTRATION 13

Four Gothic Breastplates

Left, Late XV Century

Right, XV Century

See History of Armor, page 14



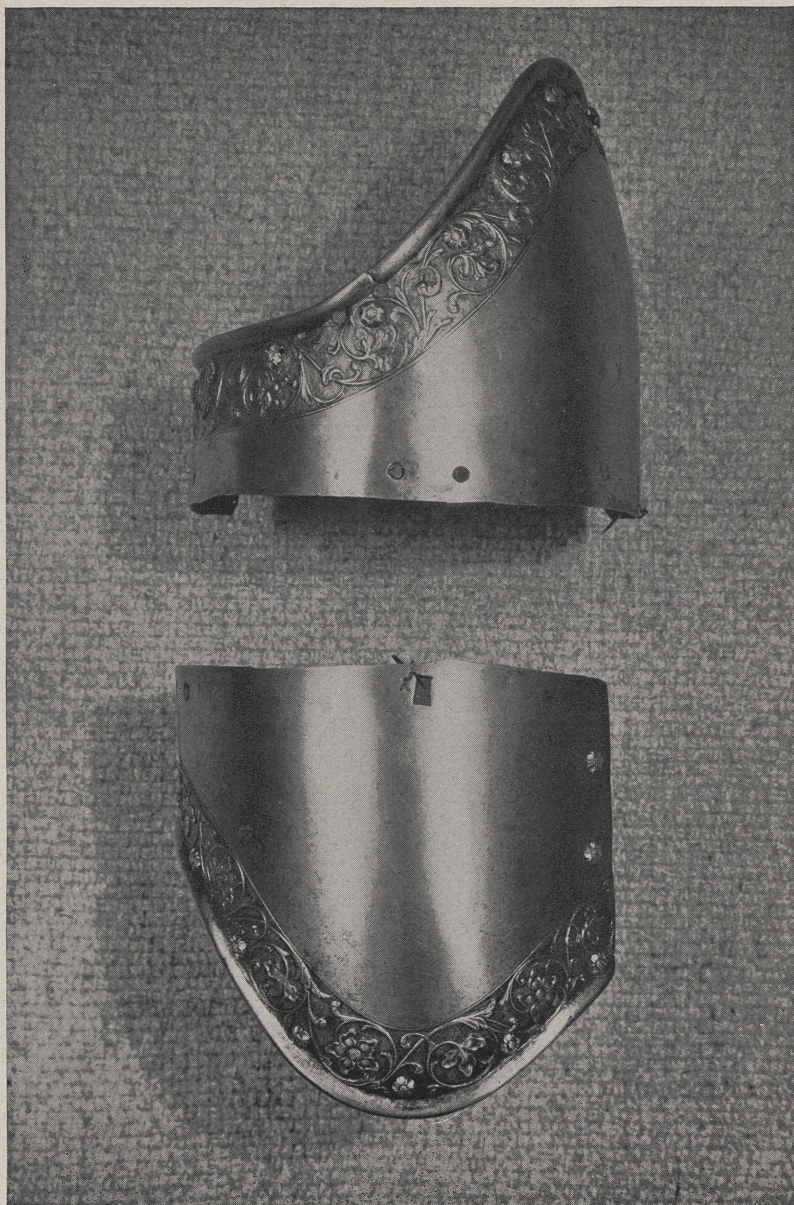


ILLUSTRATION 14  
Espalier or Shoulder Plates  
Probably by the Milanese Armorer, Negrolì  
Italian, XVI Century





ILLUSTRATION 15  
Colletin, with Engraved Bands of Silver Gilt  
French, Late XVI Century



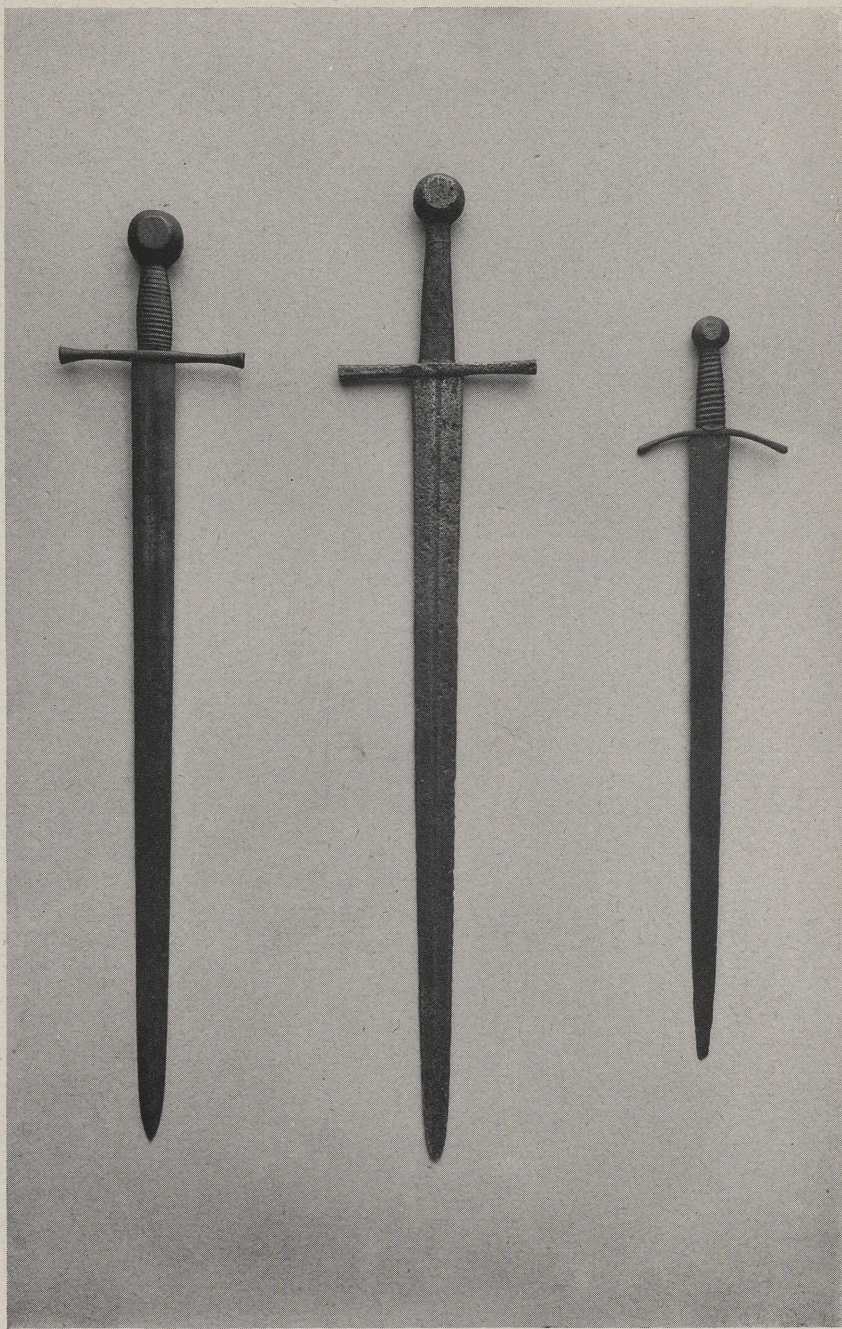


ILLUSTRATION 16  
Early Swords, XIII and XIV Centuries  
See History of Armor, page 16



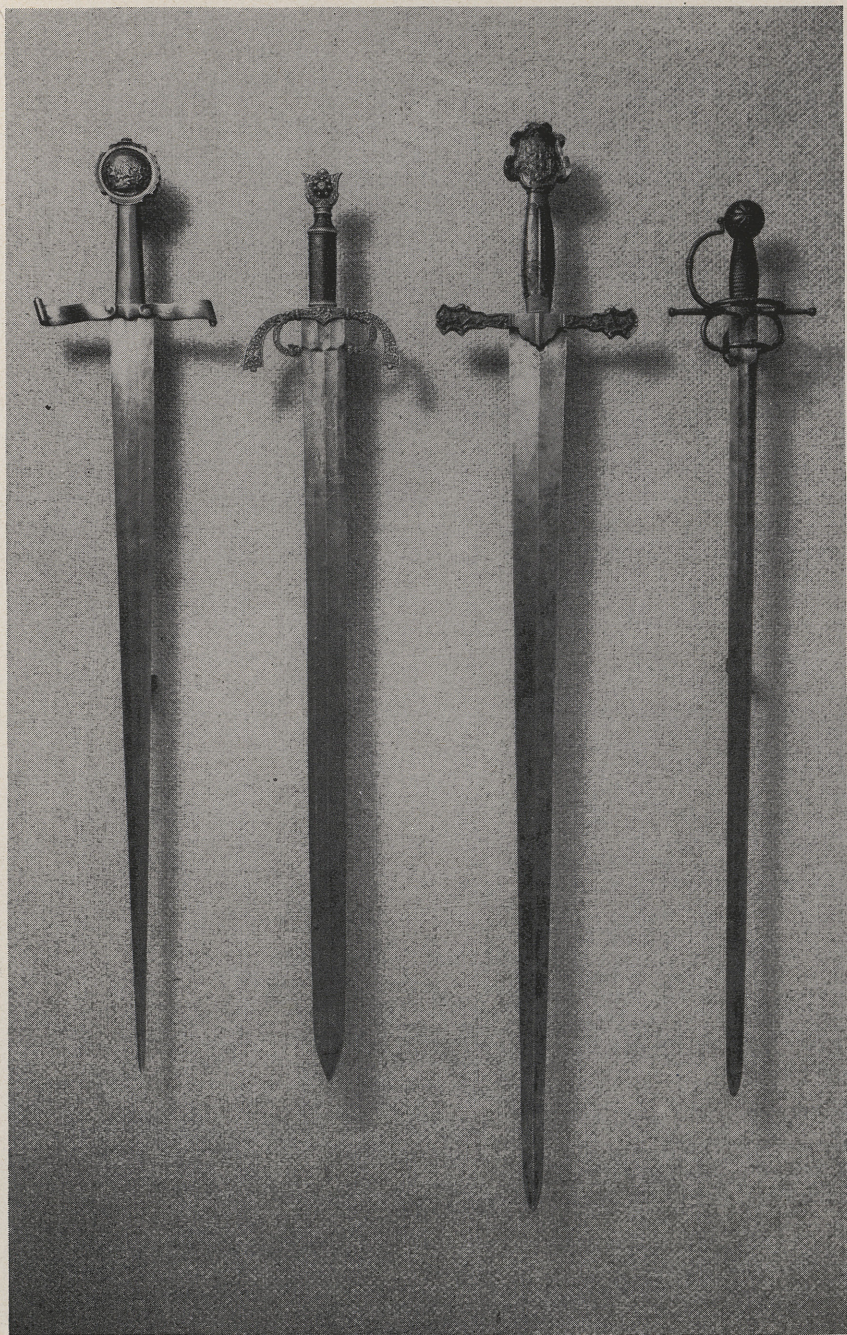


ILLUSTRATION 17  
Swords, Italian, XVI Century  
See History of Armor, pages 16-17





ILLUSTRATION 18  
Two Italian Falchions and German Hunting Sword  
with dissecting implements, XVI Century



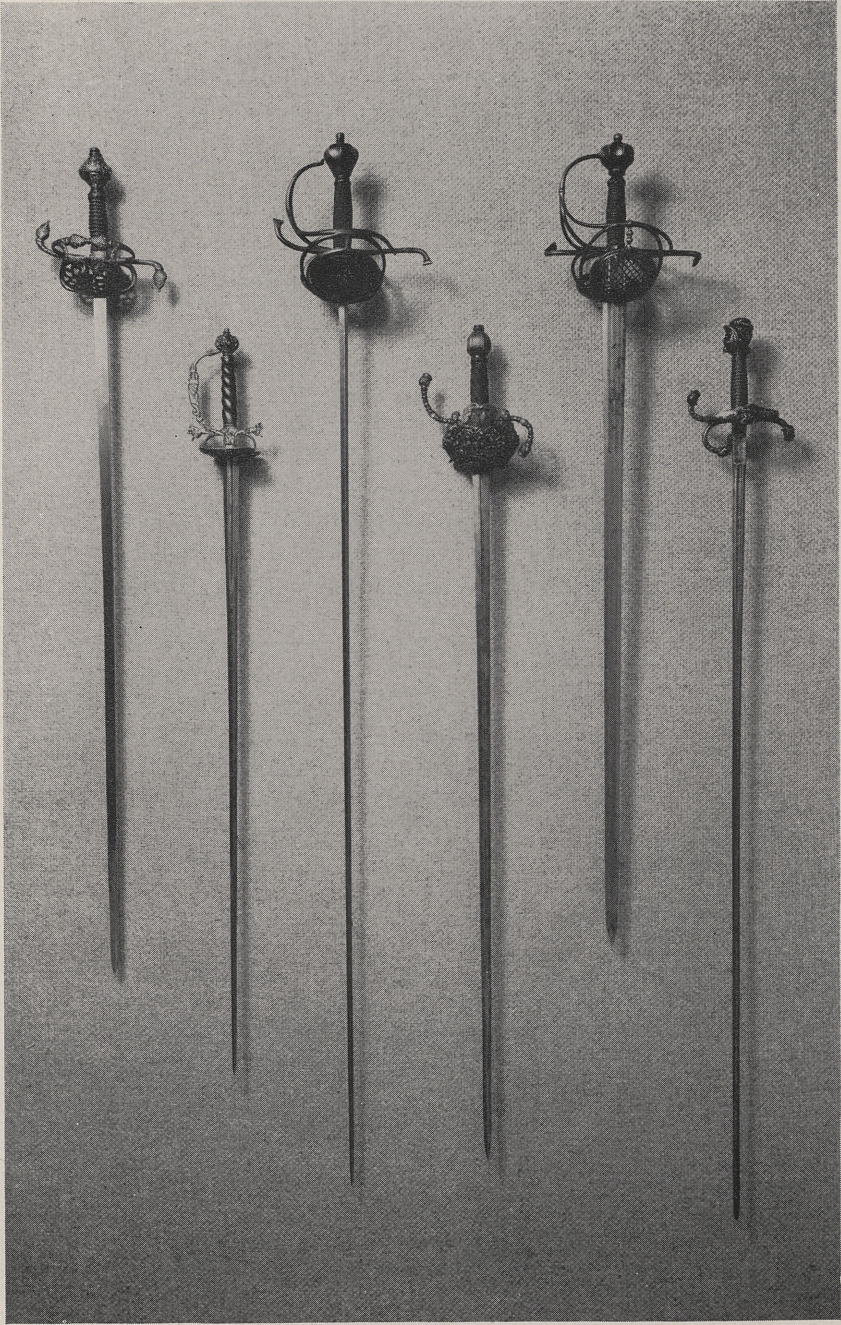


ILLUSTRATION 19  
Six Rapiers, XVII Century



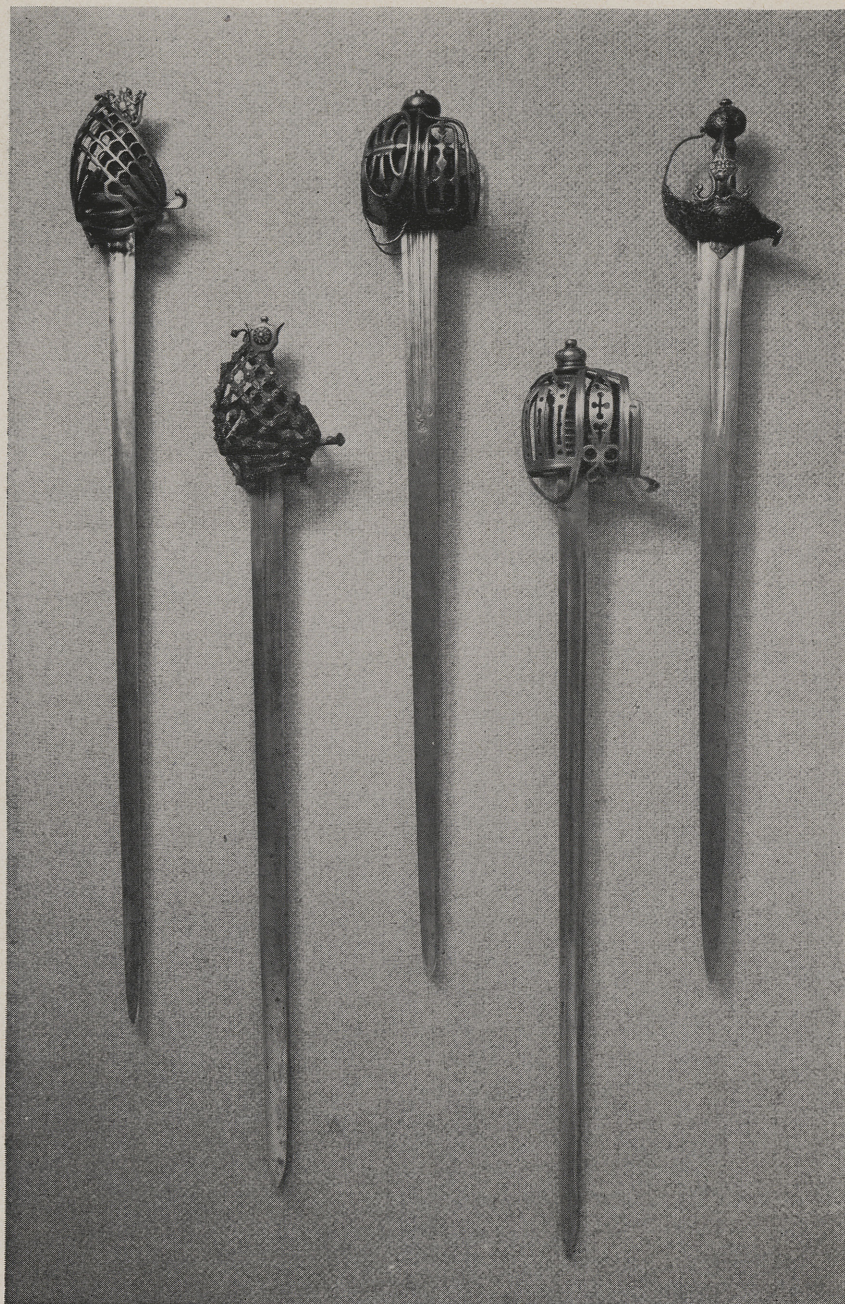


ILLUSTRATION 20  
Four Basket-Hilted Swords and  
a Mortuary Sword, XVII Century



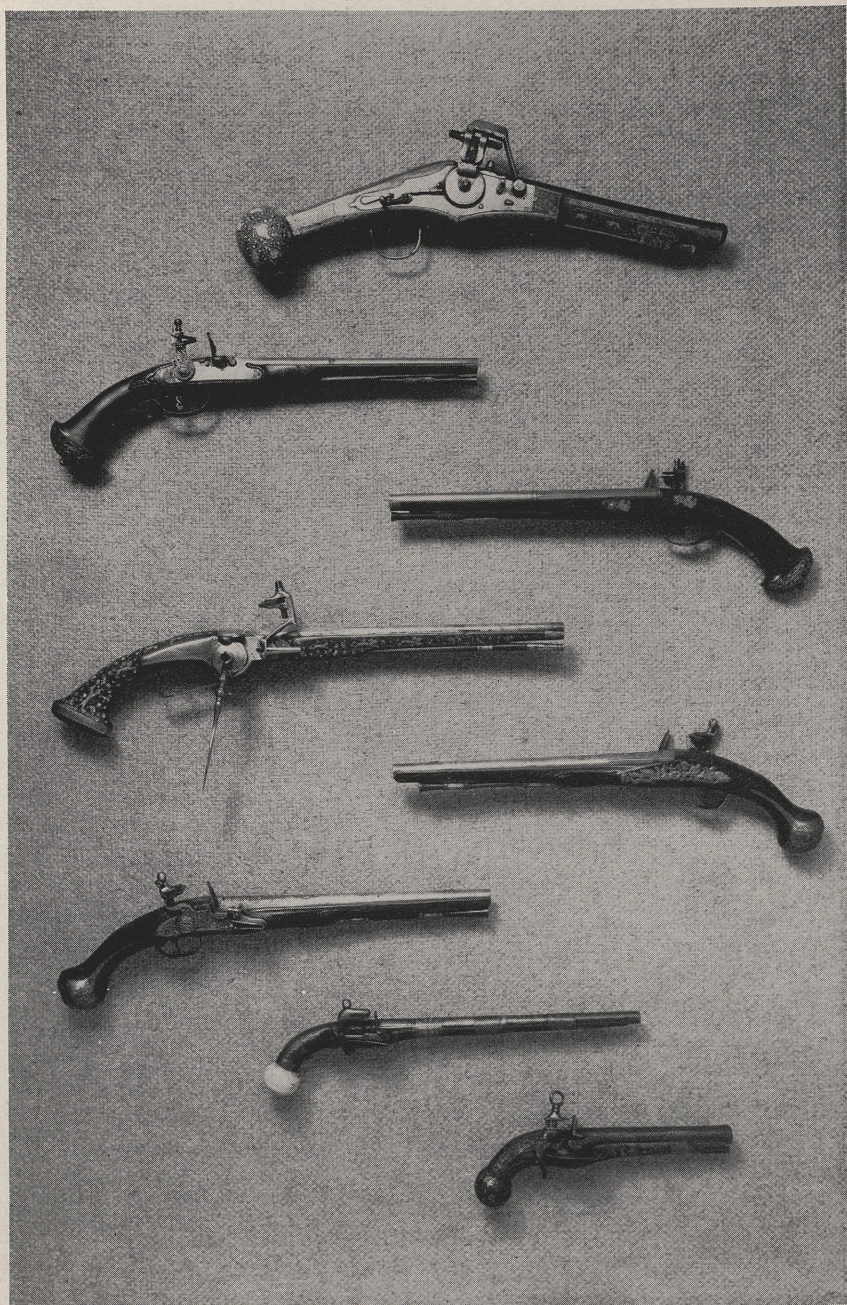


ILLUSTRATION 21  
Pistols, XVI, XVII and XVIII Centuries  
See History of Armor, page 18





ILLUSTRATION 22  
Rifles and Gun Rest, XVII Century  
See History of Armor, page 18



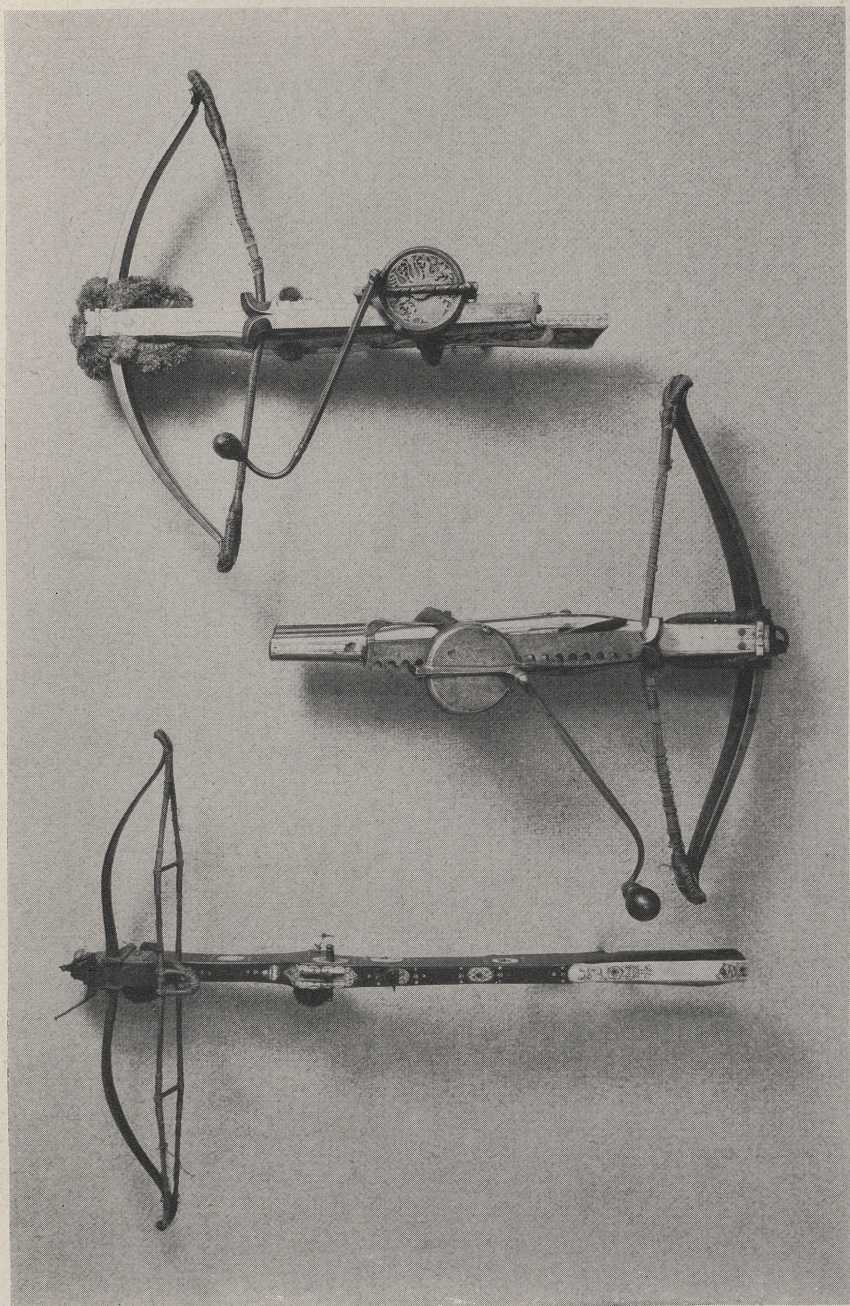


ILLUSTRATION 23  
Crossbows and Winders, XVI and XVII Centuries  
See History of Armor, page 18





ILLUSTRATION 24  
Pole Arms, XV Century  
See History of Armor, page 17





ILLUSTRATION 25  
Pole Arms, XVI and XVII Centuries  
See History of Armor, page 17





ILLUSTRATION 26  
Axes and War Hammers, XV, XVI and XVII Centuries



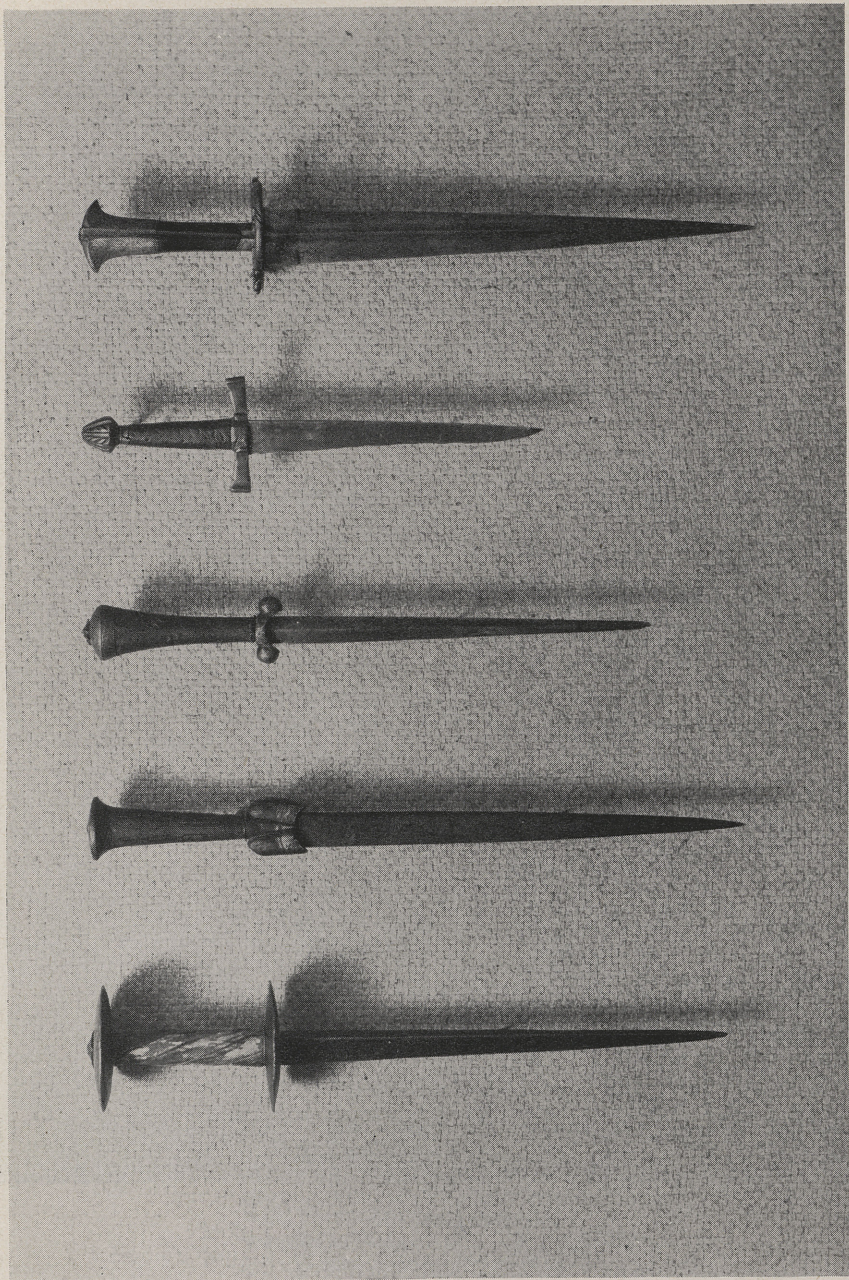


ILLUSTRATION 27  
Daggers, XV and Early XVI Centuries  
See History of Armor, page 17



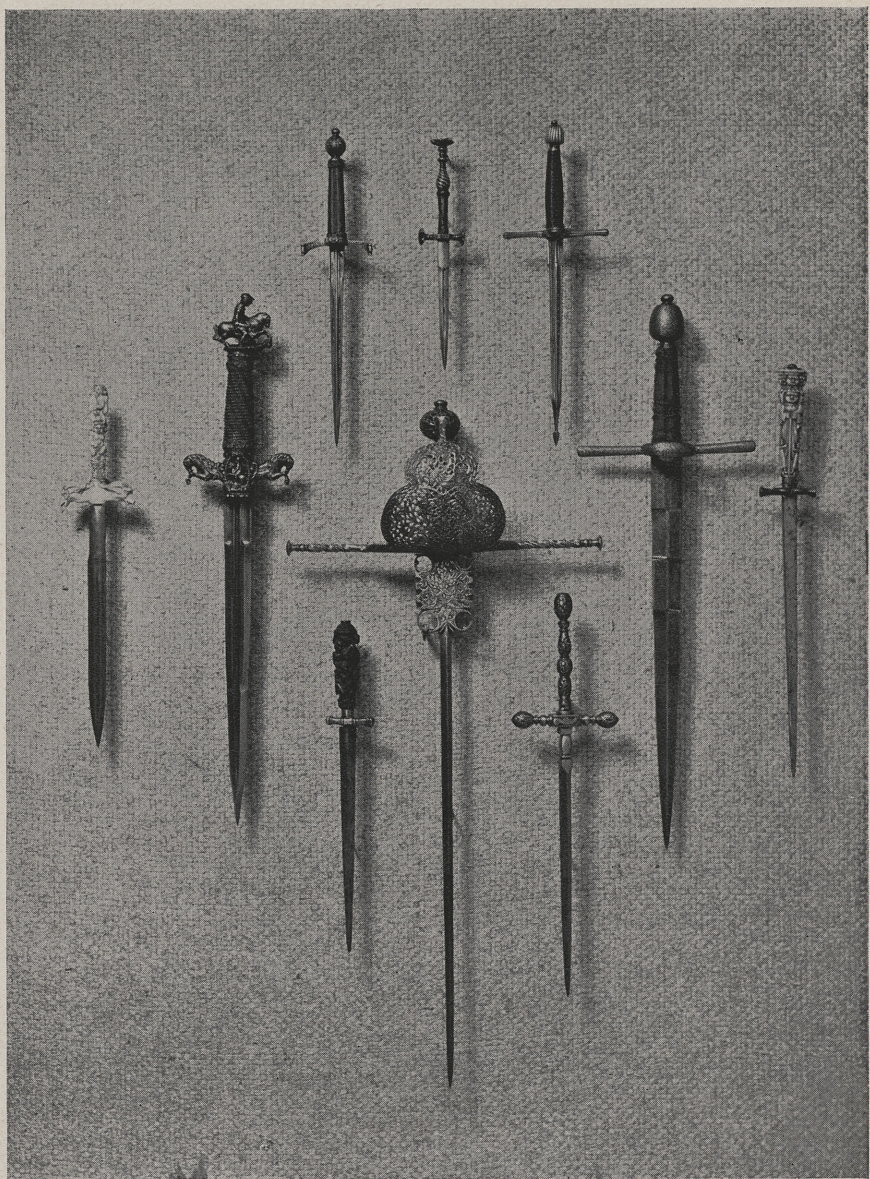


ILLUSTRATION 28  
Daggers, XV, XVI and XVII Centuries  
See History of Armor, page 17



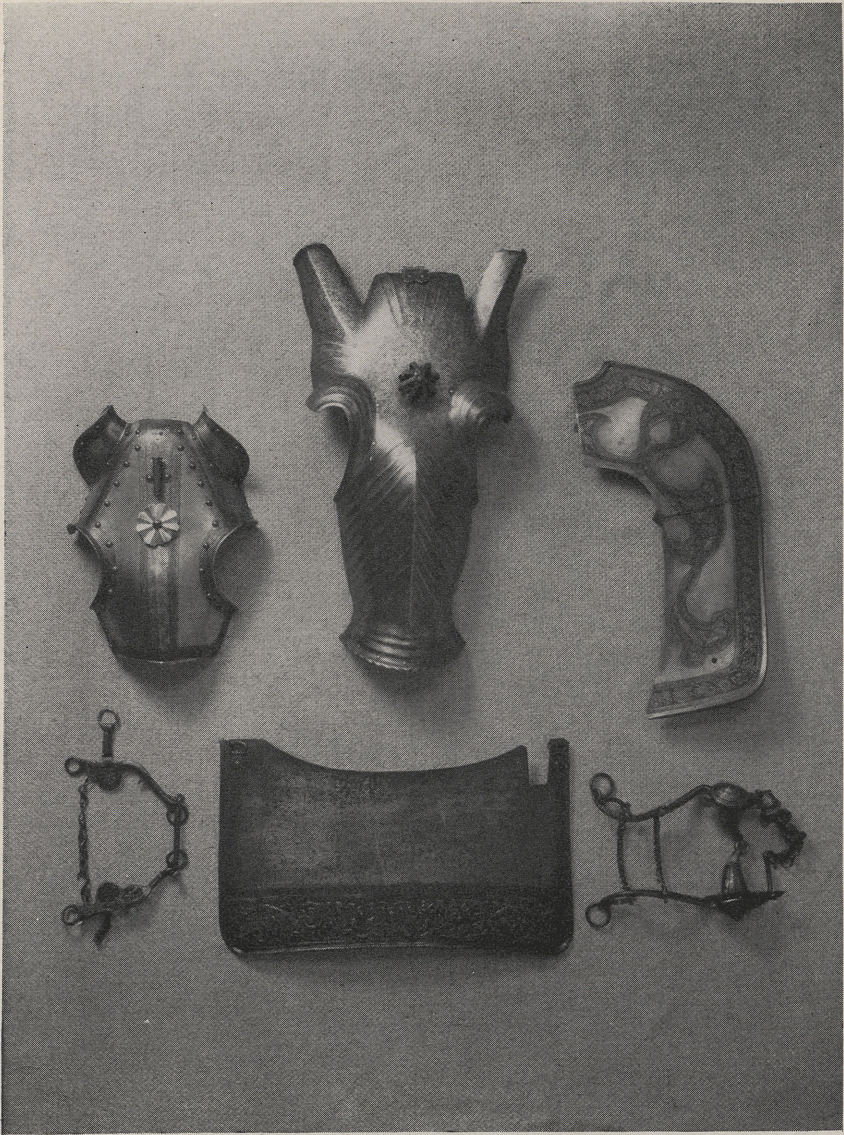


ILLUSTRATION 29  
Horse Armor and Bits, XVI Century  
See History of Armor, pages 15-16





ILLUSTRATION 30  
Maces, XV and XVI Centuries  
See History of Armor, page 17





ILLUSTRATION 31  
Rondaches, Spanish and German, XVI Century  
See History of Armor, page 18





ILLUSTRATION 32  
Rondache, probably by Hieronymo Spacini, Italian, Late XVI Century  
See History of Armor, page 18



## GLOSSARY

- Arbalest*—a crossbow.
- Armet*—a close helmet with bevor and movable visor.
- Arquebus*—a musket first used in the sixteenth century.
- Bardiche*—a variety of pole axe with long, narrow, crescent blade.
- Bastard Sword*—a long sword for cut and thrust, with grip on which two hands can be placed. Sometimes called hand-and-a-half sword.
- Bear-paw*—the wide-toed foot covering or solleret of the early sixteenth century.
- Bevor*—the chin-piece of a helmet, or a separate chin and neck defence worn with an open helmet.
- Bishop's Mantle*—a cape of chain mail.
- Brassard*—entire arm defence, vambrace, coudière, and rerebrace.
- Brayette*—plate or mail covering for the fore-body.
- Bretelles*—long metal strips which clasp the haft of a pole arm, sometimes called cheeks.
- Brigandine*—a jacket of small plates riveted to a covering of fabric.
- Bufte*—a movable face defence of two or more plates, used with an open helmet.
- Burganet*—a light, open helmet, usually with hinged ear pieces and an umbril. Sixteenth and seventeenth centuries.
- Cabasset*—a pear-shaped, open helmet with a narrow brim all around, having no comb, but, instead, usually a small apical stem. Sixteenth century.
- Calthrop*—a thorn of steel used to strew a battle field and break up a cavalry charge.
- Camail*—a hood or tippet of mail attached to the skull of early helmets.
- Casque*—a helmet; sometimes used to refer specifically to the late sixteenth and seventeenth century helmets made on classical lines.
- Casquetelle*—an open head piece with umbril and a long neck protection of several plates at the rear. Sixteenth and seventeenth centuries.
- Champs-clos*—the lists or field in which jousting or a tournament took place.
- Chanfron*—a plate defence for the face of a horse.
- Chapel de fer*—a broad-brimmed helmet of hat form. Twelfth to sixteenth century.
- Cheeks*—the strips of metal which fix the head of a pole arm to the haft. Sometimes called bretelles.
- Cinquedea*—a short, broad-bladed dagger, five fingers wide at the hilt end of the blade.
- Colichimarde*—sword blade of triangular section, narrowing above the center. Supposedly invented by Königsmark (Maréchal de Saxe).
- Colletin*—a gorget, a neck defence.
- Comb*—the crest of a helmet.
- Coronal*—a rosette or button fixed on the tip of a lance in some forms of tilting.
- Coude*—elbow-pieces of plate.
- Coudière* (*English term, elbow cap*)—elbow-pieces of plate.
- Crinet*—a series of plates to protect the neck of a horse.
- Cuir bouilli*—leather steeped in wax in which certain essences have been dissolved, a material much



- used for making armor in the thirteenth and fourteenth centuries.
- Cuirass*—body-armor.
- Cuisse*—thigh piece of plate.
- Dagger à rognons*—a dagger having kidney-shaped projections above the quillons.
- Dagger à rouelle*—a dagger with circular disks at either end of the hilt.
- Ecrivisse*—armor made from narrow, overlapping plates riveted together, sometimes called splint armor.
- Elbow gauntlet*—a metal or leather glove with cuff reaching to the elbow. Sixteenth and seventeenth centuries.
- Espalier*—shoulder defence of plate.
- Estoc*—a thrusting sword. Fourteenth to seventeenth century.
- Falchion*—a sword with wide, curving blade. Fourteenth to seventeenth century.
- Fauchard*—a pole arm having a large, convex-edged blade, and a small projection often crescent-shaped at the back; a sixteenth century form of glaive for ceremonial uses.
- Feather-staff*—a pole arm carried by an infantry captain in time of peace, consisting of a hollow staff from which spikes are released by a spring.
- Flamberge*—a two-handed sword with wavy or flamboyant blade.
- Flanchard*—armor for the flank of a horse.
- Gadling*—raised knuckle plate of a gauntlet.
- Gambeson*—a quilted tunic worn under chain mail.
- Garde de rein*—loin guard of armor.
- Genouillère*—jointed knee piece of plate.
- Glaive*—a pole arm. The term has been loosely applied to every variety of pole arm and to swords. Research suggests strongly that in the closest connotation of the word, it was a pole arm having a long, wide, convex-edged blade whether there were projections at the back or not. Fauchard, bill, and guisarme are all of the glaive type. Froissart speaks expressly of a glaive which had a long hook at the back of the blade for use in pulling down the defenders of a wall.
- Gorget*—a wide collar of plate, a colletin.
- Greave*—shin defence of plate.
- Guisarme*—a pole arm of the glaive type, having a long, convex-edged blade and one or two straight projections at the back.
- Gussets*—originally chain mail pieces tied on to cover those parts of the body not protected by plate armor. Later, the plate or the ridge on a breastplate following the contour of the under arm.
- Halberd*—a pole arm having a short axe blade at one side, a beak at the back, and an apical spike above. The name is sometimes applied to any form of pole arm as a generic term.
- Hand-and-a-half sword*—see bastard.
- Hauberk*—a shirt of chain mail.
- Holy-water sprinkler*—a spiked knob appended by a chain to a short shaft of wood or iron. This name, in catalogues of English collections, is often given to the weapon known in European armor works as a morgenstern, a long shafted weapon with a spiked knob attached directly to the shaft by bretelles.
- Jamb*—armor for the lower leg.



- Foust*—a contest between two armored knights, fought according to fixed rules.
- Lance-rest*—a projecting finger of steel fixed to the right side of a breastplate to steady and bear the weight of a lance.
- Landsknecht*—a term applied to armor or weapons of a type used by German infantry of the sixteenth century.
- Latten*—a mixture having very nearly the composition of modern brass.
- Linstock*—a combination of pike and match-holder used by gunners for firing cannon.
- Main gauche*—a dagger used by the left hand when the right held a sword.
- Martel de fer*—a war hammer.
- Match-lock*—a fifteenth century firearm with touch hole, and fired by a match.
- Maximilian armor*—a style of plate armor of the first thirty years of the sixteenth century, distinguished by broad outlines and outlined, rounded ridges, and shallow flutings. So named in honor of the Emperor Maximilian I.
- Mitten gauntlet*—a hand protection in which the fingers are not separate.
- Morion*—a light, open helmet with a crest and a swooping brim pointed fore and aft.
- Morgenstern*—a spiked knob attached to a long shaft by bretelles. See note on holy-water sprinkler.
- Moulinet*—the winder of a crossbow.
- Nasal*—a steel bar attached to the front of an open helmet for protecting the nose; in use commonly during the eleventh and twelfth centuries, revived later in some forms of seventeenth century helmets.
- Ocularium*—the eyeslits in the visor of a helmet.
- Palettes*—circular plates to protect the armpits.
- Partisan*—a pole arm with long shaft, and broad blade having two small, balancing lateral projections at the base. Sixteenth and seventeenth centuries.
- Pas d'ane*—loops of steel immediately over the cross guard of a sword, little used before the sixteenth century.
- Pauldrons*—shoulder pieces of plate.
- Pavise*—a large shield used by a bowman.
- Peascod*—a breastplate with a prominent central ridge running to a point below the waistline, used from the middle of the sixteenth century on.
- Peytreil or poitreil*—steel covering for the chest of a horse.
- Pied-de-biche*—lever for a crossbow, goat's foot type.
- Pike*—a long shafted weapon with lance-like head, used by footmen.
- Placcate*—the lower of two plates forming a cuirass.
- Plastron*—a breastplate.
- Pole axe*—a long shafted axe with spear-pointed blade, a beak, and sometimes an apical spike.
- Polichinelle*—literally a buffoon or "Punch", a name applied to a late sixteenth and seventeenth century jacket.
- Poulaine, a la*—sollerets with long, extremely pointed toe plates, the name meaning "prow of a galley."
- Prick Spur*—a spur having a single, fixed point instead of a rowel.



*Quarrel*—a crossbow bolt or arrow.

*Quillons*—the crossguard of a sword.

*Ranseur*—a pole arm having three long blades, the center one longest, the side blades extending obliquely upward.

*Rerebrace*—armor for the upper arm.

*Ricasso*—the section of the sword blade next above the quillons, thick and squared.

*Rivet*—the term formerly meant a suit of armor, but is more commonly used to refer to the small nails which fasten the plates together.

*Rondache*—a circular shield. Fifteenth and sixteenth centuries.

*Rondelle*—a circular plate; its position is varied, rondelles being used at the back of the neck in an early form of armet, and, in some fifteenth and sixteenth century suits, to protect the armpits. Rondelles or rouelles occurred at either end of the hilt of an early form of dagger.

*Runka*—a sixteenth century pole arm of ranseur type.

*Salade*—a helmet most popular in the fifteenth century, though its use is mentioned in the fourteenth by Froissart. Its distinguishing feature is its length from front to back, and the extension of the rear to protect the neck. An open helmet, sometimes in one piece, with an ocularium cut in the front of the helmet which comes down over the upper half of the face and is worn with a bevor, sometimes having a separate visor plate attached.

*Schiavona*—a basket-hilted sword of the seventeenth century, a

type carried by the Slavonic guards of the Doge of Venice.

*Shell*—a shell-shaped guard on certain forms of rapier of the end of the sixteenth century and of the early seventeenth.

*Sliding rivet*—a rivet fixed on the lower of two plates, and moving in a slot on the upper plate.

*Snaphance*—an early form of flint-lock, in which the pan has to be uncovered before firing.

*Sollerets*—shoes of plate.

*Splint armor*—that formed of narrow, overlapping plates, usually set together with sliding rivets; see *ecrivisse*.

*Spontoon*—a parade pole arm with broad central blade and smaller, balancing lateral projections, a later development of partisan in use during the seventeenth and eighteenth centuries.

*Standard of mail*—a collar of chain mail. Fifteenth century.

*Taces*—laminated plates attached to the lower part of a breastplate, running the full width of the breastplate.

*Tang of a sword*—the narrowed end which fits into the hilt.

*Tapul*—the central ridge prominent in some forms of breastplate.

*Targe*—a round shield. Viollet le Duc says that the targe first became a specialized form in the fourteenth century.

*Tassets*—plates attached at either side of the taces to protect the front of the thighs.

*Tiddle*—the button atop a sword pommel.

*Timbre*—crest of a helmet.

*Touch-box*—a box for flint and steel.



*Tournament, Tourney*—a contest waged under fixed rules by a party of knights against an opposing party.

*Tuilles*—plate defences in one piece for the front of the thighs, used in fifteenth century armor before the smaller, laminated plates of tassets made their appearance.

*Umbril*—an attached frontal brim somewhat like the visor of a modern golf cap, used on some forms of open helmet of the latter half of the sixteenth century and in the seventeenth century.

*Vambrace*—the plate defence for the fore-arm.

*Vamplate*—a circular shield fixed above the grip of a lance.

*Ventail*—that part of the face defence of a helmet which covers the middle of the face; it is pierced with breathing apertures.

*Vervelles*—loops attached to the border of an early helmet, from which a collar of mail was hung.

*Vireton*—a crossbow bolt or arrow whose wings are spirally set to produce a spinning motion in the arrow.

*Visor*—that part of the face defence of a helmet which protects the eyes and is pierced by an ocularium. When the face protection is formed of three plates, the upper is the visor, the middle plate the ventail, and the lowest, the bevor.

*Vouge*—a form of pole axe having a broad blade pointed at the head. Usually the shaft passes through two iron rings forged at the back of the blade, and a spike is affixed to the upper end of the shaft. The parade vouge of the sixteenth century varies the form chiefly by the curves of its edge and of its spike.





## SUITS OF ARMOR



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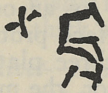
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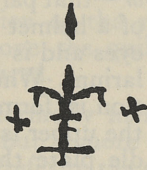
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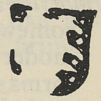
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## HELMETS



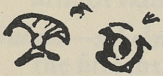
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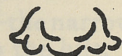
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## BODY ARMOR



17



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20



# ARMORERS' MARKS

## SUITS OF ARMOR

1. Mark of Arsenal of Zurich, xvi century, Swiss. A 2.\*
2. Early xvi century, German. A 2.
3. Early xvi century. A 2.
4. Wolf of Landshut, about 1540, German. A 6.
5. xvi century, German. A 6.
6. xvi century, German. Occurs with Wolf of Landshut mark. A 6.
7. xvi century, German. A 13.
8. xvi century, German. A 15.
9. Early xvii century, German. A 16.

## HELMETS

10. Tomaso Missaglia, about 1450, Italian. B 2.\*
11. About 1480, North Italian. B 3.
12. Early xvi century, German. B 9. See A 2.
13. xvi century, Spanish. B 23.
14. xvi century, Italian. B 25.
15. 1570, Italian. B 26.
16. About 1585, German Saxon. B 30.

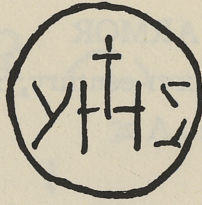
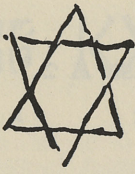
## BODY ARMOR

17. xv century, Italian. C 2.
18. Late xv century, Italian. C 3.
19. xvi century, German. C 7.
20. Middle of xvi century, Armory of Constantinople. C 8.

\* The numbers A2, B2 etc. refer to Severance Catalogue and to numbers on labels in Armor Court.



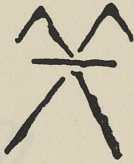
# SWORDS



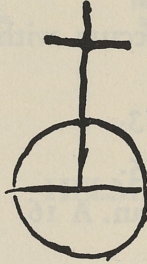
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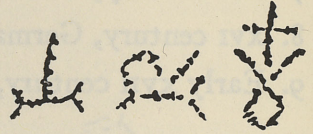
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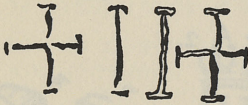
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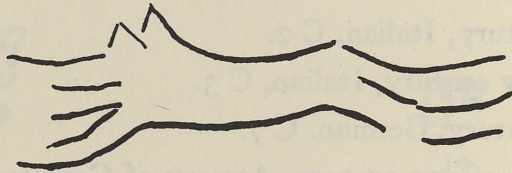
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## SWORDS

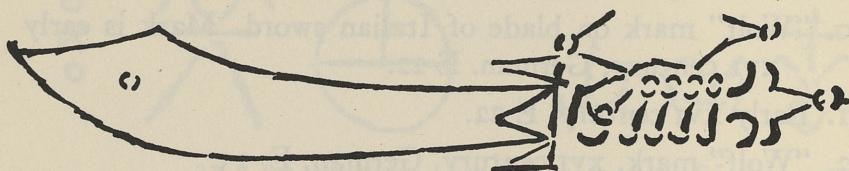
21. xiv century. E 2.
22. xv century, Austrian. E 5.
23. xv century, German. E 10.
24. Toledo mark, xv century, Spanish. E 11.
25. xv century. E 12.
26. Late xv century, Venetian. E 14.
27. End of xv century, Italian. E 15.
28. xvi century, German. E 18.
29. Early xvi century, Florentine. E 21.
30. "Wolf" mark on blade of Italian sword. Mark is early  
xvi century, German. E 22.
31. Early xvi century. E 22.
32. "Wolf" mark, xvi century, German. E. 23.
33. First of xvi century, Italian. E 24.



# SWORDS



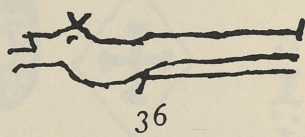
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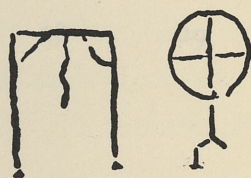
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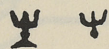
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BC

43



## SWORDS (Continued)

34. Early xvi century, German. E 25.
35. xvi century, Italian. E 27.
36. "Wolf" mark of Solingen, xvi century, German. E 30.
37. Mark of Johannes Wundes, xvi century, German. E 30.
38. xvi century, German. E 30.
39. xvi century, German. E 31.
40. Toledo mark, xvi century. E 32.
41. xvi century, North Italian. E 35.
42. xvi century, Swiss. E 36.
43. xvi century, Italian. E 39.



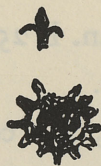
# SWORDS



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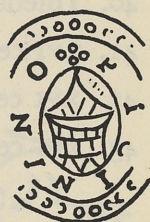
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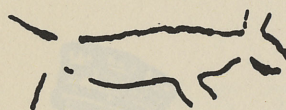
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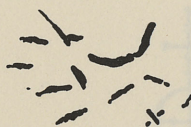
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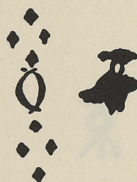
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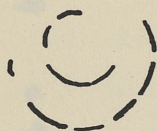


## SWORDS (Continued)

44. End of xvi century, German. E 41.
45. End of xvi century, Spanish. E 42.
46. End of xvi century, Italian. E 43.
47. 1590, German. E 44.
48. xvi century, Italian. E 46.
49. Late xvi century, Italian. E 47.
50. Late xvi century, mark on Potzdam blade of Venetian sword. E 48.
51. End of xvi century, Italian. E 49.
52. End of xvi century, Italian. E 51.
53. Antonio Picinino, end of xvi century, Italian. E 52.
54. "Wolf" or running fox mark on Italian sword, early xvii century. E 55.
55. Clemens Horn of Solingen, first quarter of xvii century, German. Hilt, Flemish. E 57.
56. First of xvii century, German. E 59.
57. About 1620, German. E 61.
58. "Wolf" mark, about 1620, German. E 61.
59. About 1620, German. E 61.
60. Early xvii century, German. E 63.
61. 1525-1537, Italian. E 65.
62. xvii century, Italian. E 68.
63. xvii century, Venetian. E 69.



# SWORDS



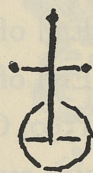
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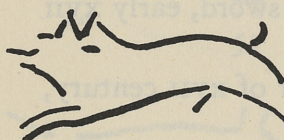
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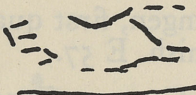
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## GUNS



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## SWORDS (Continued)

- 64. xvii century. E 71.
- 65. xvii century. E 72.
- 66. xvii century. E 75.
- 67. Solingen, 1640-1666, German blade on French hilt. E 78.
- 68. xvii century. E 79.
- 69. xvii century, German blade on Scotch hilt. E 84.
- 70. xvii century, German blade on Scotch hilt. E 84.
- 71. Solingen, xvii century, German blade on Scotch hilt. E 84.
- 72. Solingen, xvii century, German blade on French hilt. E 90.
- 73. End of xvii century, Italian. E 94.
- 74. Solingen, xviii century, German blade on Spanish hilt. E 99.

## GUNS AND GUN PARTS

- 75. xvii century, Caucasian. F 6.
- 76. xvii century, Sardinian. F 9.
- 77. 1618, Spanish. F 10.
- 78. Early xvii century, Italian, Brescian. F 14.
- 79. First half of the xviii century, German. F 18.
- 80. xviii century, Oriental. F 19.
- 81. xviii century, Italian. F 20.



# GUNS

## Gzival.a.Zoulon

82



83

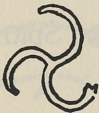


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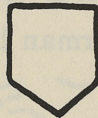


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### CROSSBOWS, WINDERS, AND QUARRELS



86



87



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89

### POLE ARMS



90



91



92



93



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100



## GUNS AND GUN PARTS (Continued)

- 82. xvii century, French. F 74.
- 83. About 1750, Spanish. F 86.
- 84. xviii century, Italian. F 87.
- 85. First of xix century, Spanish. F 90.

## CROSSBOWS AND WINDERS

- 86. xv century, Spanish. G 1.
- 87. xvii century, English. G 5.
- 88. 1612, German. G 7.
- 89. Latter half of xvi century, Saxon. G 9.

## POLE ARMS

- 90. About 1375, Swiss. H 1. See A 2.
- 91. xv century, Italian. H 3.
- 92. xv century. H 4.
- 93. xv century, Italian. H 5.
- 94. xv century, German or Swiss. H 8.
- 95. xv century, Italian. H 10.
- 96. About 1470, Swiss. H 12.
- 97. xv century, German. H 13.
- 98. End of xv century, Italian. H 19.
- 99. End of xv century, Swiss. H 21.
- 100. xvi century, Italian. H 24.



## POLE ARMS



101

102



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103



104



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MK

109



110



III

D\*De 50 PLVX

## DAGGERS



112



113



114



115



116



POLE ARMS (Continued)

- 101. xvi century, Italian. H 25.
- 102. 1520, Italian. H 26.
- 103. Early xvi century, Tyrolese. H 28, H 33.
- 104. Mark of Milan, xvi century, Italian. H 30.
- 105. xvi century, German. H 34.
- 106. xvi century, German. H 35.
- 107. xvi century, Tyrolese. H 47.
- 108. Late xvi century, French. H 53.
- 109. 1675, German. H 62.
- 110. xvii century, German. H 71.
- 111. End of xvii century, French. H 77.

DAGGERS, STILETTOS, AND KNIVES

- 112. xv century, Italian. I 2.
- 113. About 1510, Swiss. I 9.
- 114. xvi century, German. I 10.
- 115. xvii century, Indian. I 40.
- 116. xviii century, Italian. I 50.

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